#### SCHEDULE 1

Article 4(6), 23(2) and 99(8)

PART A
TABLE OF GENERAL CLASSIFICATION OF AIRCRAFT

Column 1	Column 2	Column 3	Column 4
	{ Lighter than air aircraft	(N 1-:	{ Free balloon
		{ Non-power driven	{ Captive balloon
	unorun	{ Power driven	{ Airship
		{ Non-power driven	{ Glider
			{ Kite
Aircraft	{ Heavier than air aircraft	{ Power driven (flying machines)	{ Aeroplane (Landplane)
			{ Aeroplane (Seaplane)
			{ Aeroplane (Amphibian)
			{ Aeroplane (Self- launching motor glider)
			{ Rotorcraft (Helicopter)
			{ Rotorcraft (Gyroplane)

Article 5(2)

# PART B

# NATIONALITY AND REGISTRATION MARKS OF AIRCRAFT REGISTERED IN HONG KONG

- 1. The nationality mark of the aircraft shall be a group of two capital letters in Roman character assigned by the Governor on the registration of the aircraft. The letters shall be without ornamentation and a hyphen shall be placed between the nationality mark and the registration mark.
- **2.** The nationality and registration marks shall be displayed to the best advantage, taking into consideration the constructional features of the aircraft and shall always be kept clean and visible.
- **3.** The letters constituting each group of marks shall be of equal height and they, and the hyphen, shall all be of the same single colour which shall clearly contrast with the background on which they appear.
- **4.** The nationality and registration marks shall also be inscribed, together with the name and address of the registered owner of the aircraft, on a fireproof metal plate affixed in a prominent position—

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- (a) in the case of an aeroplane having an empty weight not exceeding 150 kg either in accordance with paragraph (c) or on the wing;
  - (b) in the case of a balloon, on the basket or envelope; or
  - (c) in the case of any other aircraft on the fuselage or car, as the case may be.
- **5.** The nationality and registration marks shall be painted on the aircraft or shall be affixed thereto by any other means ensuring a similar degree of permanence in the following manner:

#### I. Position of marks

- (a) Flying Machines and Gliders
  - (i) Horizontal Surfaces of the Wings or Fuselage (or equivalent structure).
    - (aa) On aircraft having a fixed wing surface, the marks shall appear on the lower surface of the wing structure, and shall be on the left half of the lower surface of the wing structure unless they extend across the whole surface of both wings. So far as is possible the marks shall be located equidistant from the leading and trailing edges of the wings. The tops of the letters shall be towards the leading edge of the wing.
    - (bb) On aircraft having no fixed wing surface and when owing to the structure of the aircraft the greatest height reasonably practicable for the marks on the vertical surface of the fuselage (or equivalent structure) is less than 15 centimetres the marks shall also appear on the lower surface of the fuselage on the line of symmetry and shall be placed with the tops of the letters towards the nose.
  - (ii) Vertical Surfaces of the Tail or Fuselage (or equivalent structure): The marks shall also be on each side of the aircraft either on the fuselage or on the upper halves of the vertical tail surfaces. On aircraft having a fixed wing surface, the marks, if placed on the fuselage (or equivalent structure), shall be between the horizontal tail surfaces and the wing. When on a single vertical tail surface, the marks shall be on both sides. When there is more than one vertical tail surface, the marks shall be on the outer sides of the outboard vertical tail surfaces.
- (b) Airships and Free Balloons
  - (i) *Airships*: The marks shall be on each side of the airship. They shall be placed horizontally either on the hull near the maximum cross-section of the airship or on the lower vertical stabiliser.
  - (ii) Free Balloons: The marks shall be in two places diametrically opposite.
- (iii) In the case of all airships and free balloons the side marks shall be so placed as to be visible both from the sides and from the ground.

# II. Size of Marks

- (a) Flying Machines and Gliders
  - (i) *Wings:* The letters constituting each group of marks shall be of equal height. The height of the letters shall be at least 50 centimetres.
  - (ii) Fuselage (or equivalent structure) or Vertical Tail Surfaces: The marks on the fuselage (or equivalent structure) shall not interfere with the visible outlines of the fuselage (or equivalent structure). The marks on the vertical tail surfaces shall be such as to leave a margin of at least 5 centimetres along each side of the vertical tail surface. The letters shall be of equal height. The height of the letters constituting each group of marks shall be at least 30 centimetres. Where marks are required to be carried out on the lower surface of aircraft having no fixed wing surface, the height of the marks shall be at least 50 centimetres:

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Provided that where owing to the structure of the aircraft the appropriate height specified in this sub-paragraph (ii) is not reasonably practicable, the height of the marks shall be the greatest height reasonably practicable in the circumstances consistent with compliance with Section III of this Part of this Schedule

(b) Airships and Free Balloons

The letters constituting each group of marks shall be of equal height. The height of the letters shall be at least 50 centimetres.

# III. Width and Spacing of Marks

- (a) The width of each letter (except the letter I) and the length of the hyphen between the nationality mark and registration mark shall be two-thirds of the height of a letter.
- (b) The letters and hyphen shall be formed by solid lines and shall be of a colour clearly contrasting with the background on which they appear. The thickness of the lines shall be one-sixth of the height of a letter.
- (c) Each letter shall be separated from the letter which it immediately precedes or follows by a space equal to half the width of a letter. A hyphen shall be regarded as a letter for this purpose.

Article 4(8)

# PART C

## AIRCRAFT DEALER'S CERTIFICATE—CONDITIONS

- (1) The operator of the aircraft shall be the registered owner of the aircraft, who shall be the holder of an aircraft dealer's certificate granted under this Order.
  - (2) The aircraft shall fly only for the purpose of:
    - (a) testing the aircraft; or
    - (b) demonstrating the aircraft with a view to the sale of that aircraft or of other similar aircraft; or
    - (c) proceeding to or from a place at which the aircraft is to be tested or demonstrated as aforesaid, or overhauled, repaired or modified; or
    - (d) delivering the aircraft to a person who has agreed to buy, lease or sell it; or
    - (e) proceeding to or from a place for the purpose of storage.
- (3) Without prejudice to the provisions of Article 32 of this Order the operator of the aircraft shall satisfy himself before the aircraft takes off that the aircraft is in every way fit for the intended flight.
  - (4) The aircraft shall fly only within Hong Kong.

# SCHEDULE 2

Articles 3(1), 7(1) and 39(7)

## A and B Conditions

The A Conditions and B Conditions referred to in Article 3(1), 7(1) and 39(7) of this Order are as follows:

A Conditions

- (1) The aircraft shall be either an aircraft in respect of which a certificate of airworthiness or validation has previously been in force under this Order, or an aircraft identical in design with an aircraft in respect of which such a certificate is or has been in force.
- (2) The aircraft shall fly only for the purpose of enabling it to:
  - (a) qualify for the issue or renewal of a certificate of airworthiness or of the validation thereof or the approval of a modification of the aircraft, after an application has been made for each issue, renewal, validation or approval as the case may be;
  - (b) proceed to or from a place at which any inspection, approval, test or weighing of, or the installation of equipment in, the aircraft is to take place for a purpose referred to in sub-paragraph (a), after such an application has been made, or at which the installation of furnishings in, or the painting of, the aircraft is to be undertaken; or
  - (c) proceed to or from a place at which the aircraft is to be or has been stored.
- (3) The aircraft and its engines shall be certified as fit for flight by the holder of an aircraft maintenance engineer's licence granted under this Order, being a licence which entitles him to issue that certificate or by a person approved by the Governor for the purpose of issuing certificates under this condition, and in accordance with that approval.
- (4) The aircraft shall carry the minimum flight crew specified in any certificate of airworthiness or validation, which has previously been in force under this Order in respect of the aircraft, or is or has previously been in force in respect of any other aircraft of identical design.
- (5) The aircraft shall not carry any persons or cargo except persons performing duties in the aircraft in connection with the flight or persons who are carried in the aircraft to perform duties in connection with a purpose referred to in paragraph (2) of these Conditions.
- (6) The aircraft shall not fly over any congested area of a city, town or settlement except to the extent that it is necessary to do so in order to take off from or land at a Government aerodrome or a licensed aerodrome, in accordance with normal aviation practice.
- (7) Without prejudice to the provisions of Article 18(2) of this Order, the aircraft shall carry such flight crew as may be necessary to ensure the safety of the aircraft.

### **B** Conditions

- (1) The flight shall be made under the supervision of a person approved by the Governor for the purpose of these Conditions, and subject to any additional conditions which may be specified in such approval.
- (2) If it is not registered in Hong Kong or under the law of any country referred to in Article 3 of this Order, the aircraft shall be marked in a manner approved by the Governor for the purpose of these Conditions, and the provisions of Articles 14, 15, 19, 32, 35, 57 and 59 of this Order shall be complied with in relation to the aircraft as if it was registered in Hong Kong so far as such provisions are applicable to the aircraft in the circumstances.
- (3) The aircraft shall fly only for the purpose of:
  - (a) experimenting with or testing the aircraft (including in particular its engines) and its equipment;
  - (b) enabling it to qualify for the issue of a certificate of airworthiness or the validation thereof, or the approval of a modification of the aircraft;
  - (c) proceeding to or from a place at which any experiment, inspection, approval, test or weighing of, or the installation of equipment in, the aircraft is to take place for a purpose referred to in sub-paragraph (a) or (b), or at which the installation of furnishings in, or the painting of, the aircraft is to be undertaken; or

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- (d) demonstrating the aircraft with a view to the sale of that aircraft or of other similar aircraft.
- (4) Without prejudice to the provisions of Article 18(2) of this Order, the aircraft shall carry such flight crew as may be necessary to ensure the safety of the aircraft.
- (5) The aircraft shall not carry any cargo, or any persons other than the flight crew except the following:
  - (a) persons employed by the operator who carry out during the flight duties in connection with the purposes specified in paragraph (3) of these Conditions;
  - (b) persons employed by manufacturers of component parts of the aircraft (including its engines) who carry out during the flight duties in connection with the purposes so specified;
  - (c) persons approved by the Governor under Article 101 of this Order as qualified to furnish reports for the purposes of Article 8 of this Order;
  - (d) persons, other than those carried under the preceding provisions of this paragraph, who are carried in the aircraft in order to carry out a technical evaluation of the aircraft or its operation.
- (6) The aircraft shall not fly, except in accordance with procedures which have been approved by the Governor in relation to that flight, over any congested area of a city, town or settlement.

## SCHEDULE 3

Article 3

# CATEGORIES OF AIRCRAFT

Transport Category (Passenger).

Transport Category (Cargo).

Aerial Work Category.

Private Category.

Special Category.

The purposes for which the aircraft may fly are as follows:

Transport Category (Passenger): Any purpose.

Transport Category (Cargo): Any purpose other than the public transport of passengers.

Aerial Work Category: Any purpose other than public transport.

*Private Category:* Any purpose other than public transport or aerial work.

*Special Category:* Any purpose, other than public transport, specified in the certificate of airworthiness but not including the carriage of passengers unless expressly permitted.

## **SCHEDULE 4**

Article 73

#### AERODROME MANUAL

Information and instructions relating to the following matters shall be included in the aerodrome manual referred to in Article 73 of this Order:

- (i) the name and status of the official in charge of day to day operation of the aerodrome together with the names and status of other senior aerodrome operating staff and instructions as to the order and circumstances in which they may be required to act as the official in charge;
- (ii) the system of aeronautical information service available;
- (iii) procedures for promulgating information concerning the aerodrome's state;
- (iv) procedures for the control of access, vehicles and work in relation to the aerodrome manoeuvring area and apron;
- (v) procedures for complying with Article 86 of this Order and for the removal of disabled aircraft;
- (vi) in the case of an aerodrome which has facilities for fuel storage, procedures for complying with Article 82 of this Order;
- (vii) plans to a scale of 1:2500 depicting the layout of runways, taxiways and aprons, aerodrome markings, aerodrome lighting if such lighting is provided, and the siting of any navigational aids within the runway strip:
  - Provided that in the case of copies of the manual or extracts thereof provided or made available to a member of the aerodrome operating staff, the plans shall be of a scale reasonably appropriate for the purposes of Article 73(10) of this Order;
- (viii) in respect of an aerodrome in relation to which there is a notified instrument approach procedure, survey information sufficient to provide data for the production of aeronautical charts relating to that aerodrome;
- (ix) description, height and location of obstacles which infringe standard obstacle limitation surfaces, and whether they are lit;
- (x) data for and method of calculation of declared distances and elevations at the beginning and end of each declared distance;
- (xi) method of calculating reduced declared distances and the procedure for their promulgation;
- (xii) details of surfaces and bearing strengths of runways, taxiways and aprons;
- (xiii) the system of the management of air traffic in the airspace associated with the aerodrome, including procedures for the coordination of traffic with adjacent aerodromes, except any such information or procedures already published in any manual of air traffic services;
- (xiv) operational procedures for the routine and special inspection of the aerodrome manoeuvring area and aprons;
- (xv) if operations are permitted during periods of low visibility, procedures for the protection of the runways during such periods;
- (xvi) procedures for the safe integration of all aviation activities undertaken at the aerodrome;
- (xvii) procedures for the control of bird hazards;
- (xviii) procedures for the use and inspection of the aerodrome lighting system, if such a system is provided; and
- (xix) the scale of rescue, first aid and fire service facilities, the aerodrome emergency procedures and procedures to be adopted in the event of temporary depletion of the rescue and fire service facilities.

#### SCHEDULE 5

Articles 11(4) and 13(2)

# AIRCRAFT EQUIPMENT

1. Every aircraft of a description specified in the first column of the Table set forth in paragraph 4 of this Schedule and which is registered in Hong Kong shall be provided, when flying in the circumstances specified in the second column of the said Table, with adequate equipment, and for the purpose of this paragraph the expression 'adequate equipment' shall mean the scales of equipment respectively indicated in that Table:

Provided that, if the aircraft is flying in a combination of such circumstances, the scales of equipment shall not on that account be required to be duplicated.

- **2.** The equipment carried in an aircraft as being necessary for the airworthiness of the aircraft shall be taken into account in determining whether this Schedule is complied with in respect of that aircraft.
- **3.** The following items of equipment shall not be required to be of a type approved by the Governor:
  - (a) The equipment referred to in Scale A (ii).
  - (b) First aid equipment and handbook, referred to in Scale A.
  - (c) Time-pieces, referred to in Scale F.
  - (d) Torches, referred to in Scales G, H, K and Z.
  - (e) Whistles, referred to in Scale H.
  - (f) Sea anchors, referred to in Scales J and K.
  - (g) Rocket signals, referred to in Scale J.
  - (h) Equipment for mooring, anchoring or manoeuvring aircraft on the water, referred to in Scale J.
  - (i) Paddles, referred to in Scale K.
  - (j) Food and water, referred to in Scales K, U and V.
  - (k) First aid equipment, referred to in Scales K, U and V.
  - (l) Stoves, cooking utensils, snow shovels, ice saws, sleeping bags and Arctic suits, referred to in Scale V.
  - (m) Megaphones, referred to in Scale Y1 and Y2.

## 4. Table

Description of Aircraft	Circumstances of Flight	Scale of Equipment Required
(1) Gliders	<ul><li>(a) (a) flying for purposes other than public transport or aerial work: and when flying by night;</li></ul>	``
	(b) (b) flying for the purpose of public transport or aerial work: and	
	(i) when flying by night	C and G

Description of Aircraft	Circumstances of Flight	Scale of Equipment Required
	(ii) when carrying out aerobatic manoeuvres	B (iii)
(2) Aeroplanes	(a) (a) flying for purposes other than public transport; and	A(i) and (ii) and B(i)
	(i) when flying by night	C and D
	(ii) when flying under Instrument Flight Rules	
	(aa) outside controlled airspace	D
	(bb) within controlled airspace	E with E(iv) duplicated and F
	(iii) when carrying out aerobatic manoeuvres	B (iii)
	(b) (b) flying for the purpose of public transport; and	A, B(i) and (ii), D and F(i)
	(i) when flying under Instrument Flight Rules except flights outside controlled airspace by aeroplanes having a maximum total weight authorised not exceeding 1,150 kg.	E with E(iv) duplicated and F
	(ii) when flying by night; and in the case of aeroplanes of which the maximum total weight authorised exceeds 1,150 kg.	C and G, E with E(iv) duplicated and F
	<ul><li>(iii) when flying over water beyond gliding distance from land</li></ul>	Н
	(iv) on all flights on which in the event of any emergency occurring during the take-off or during the landing at the intended destination or any likely alternate destination it is reasonably possible that the aeroplane would be forced to land onto water	H
	(v) when flying over water:	H and K

Description of Aircraft

Circumstances of Flight

Scale of Equipment Required

(aa) in the case of an aeroplane:

(aaa) classified in its certificate of airworthiness as being of performance group A, C or X;

or (bbb) having no performance group classification in its certificate of airworthiness and of such a weight and performance that with any one of its power units inoperative and the remaining power unit or units operating within the maximum continuous power conditions specified in the certificate of air-worthiness, performance schedule or flight manual relating to the aeroplane issued or rendered valid by the Governor it is capable of a gradient of climb of at least 1 in 200 at an altitude of 5000 ft in the International Standard Atmosphere specified in or ascertainable

by reference to

Description of Aircraft	Circumstances of Flight	Scale of Equipment Required
	the certificate of airworthiness in force in respect of that aircraft, when either more than 400 nautical miles or more than 90 minutes flying time from the nearest aerodrome at which an emergency landing can be made.	
	(bb) in the case of all other aeroplanes, when more than 30 minutes flying time(1) from such an aerodrome.	H and K
	(vi) on all flights which involve manoeuvres on water.	H, J and K
	(vii) when flying at a height of 10,000ft or more above mean sea level:	
	(aa) having a certificate of airworthiness first issued (whether in Hong Kong or elsewhere) before 1 January 1989.	L1 or L2
	(bb) having a certificate of airworthiness first issued (whether in Hong Kong or elsewhere) on or after 1 January 1989.	L2
	(viii) on flights when the weather reports or forecasts available at the aerodrome at the time of departure indicate that conditions favouring ice	M

<sup>(1)</sup> For the purposes of this Table, flying time shall be calculated on the assumption that the aircraft is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

Description of Aircraft	Circumstances of Flight	Scale of Equipment Required
	formation are likely to be met.	
	(ix) when carrying out aerobatic manoeuvres.	B(iii)
	(x) on all flights on which the aircraft carries a flight crew of more than one person.	N
	(xi) on all flights for the purpose of the public transport of passengers.	Q and Y2(i), (ii) and (iii)
	(xii) on all flights by a pressurised aircraft.	R2
	(xiii) when flying over substantially uninhabited land areas where, in the event of an emergency landing, tropical conditions are likely to be met.	U
	(xiv) when flying over substantially uninhabited land or other areas where, in the event of any emergency landing, polar conditions are likely to be met.	V
	(vx) when flying at an altitude of more than 49,000 ft.	W
(3) Turbine-jet aero-planes having a maximum total weight authorised exceeding 5,700 kg or pressurised aircraft having a maximum total weight authorised exceeding 11,400 kg.		O
(4) Turbine-engined aeroplanes having a maximum total weight authorised exceeding 5,700 kg and pistonengined aeroplanes having a maximum total weight authorised exceeding 27,000 kg		
(a) (a) which are operated by an air transport undertaking under a certificate of	when flying on any flight	P

Description of Aircraft	Circumstances of Flight	Scale of Equipment Required
airworthiness in the Transport Category (Passenger) or the Transport Category (Cargo); or	, G	V 1 1 1
(b) (b) in respect of which application has been made and not withdrawn or refused for such a certificate, and which fly under the 'A Conditions' or under a certificate of airworthiness in the Special Category:	when flying on any flight	P
Provided that this paragraph shall not apply to aeroplanes falling within paragraphs (5) or (6) hereof.		
(5) Aeroplanes in respect of which there is in force a certificate of airworthiness in the Transport Category (Passenger) or Transport Category (Cargo) and aeroplanes in respect of which application has been made, and not withdrawn or refused, for such a certificate of airworthiness and which fly under the 'A Conditions' or in respect of which there is in force a certificate of airworthiness in the Special Category:		
(a) (a) which conform to a type first issued with a type certificate (whether in Hong Kong or elsewhere) on or after 1 April 1971 and which have a maximum total weight authorised exceeding 5,700 kg but not exceeding 11,400 kg; or	when flying on any flight	S(i)
(b) (b) which conform to a type	when flying on any flight	S(ii)

Description of Aircraft	Circumstances of Flight	Scale of Equipment Required
first issued with a type certificate (whether in Hong Kong or elsewhere) on or after 1 April 1971 and which have a maximum total weight authorised exceeding 11,400 kg but not exceeding 27,000 kg; or		
(c) (c) which conform to a type first issued with a type certificate (whether in Hong Kong or elsewhere) on or after 1 April 1971 and which have a maximum total weight authorised exceeding 27,000 kg but not exceeding 230,000 kg: or	when flying on any flight	S(iii)
(d) (d) which conform to a type first issued with a type certificate in Hong Kong on or after 1 January 1970 and which have a maximum total weight authorised exceeding 230,000 kg:	when flying on any flight	S (iii)
Provided that this paragraph shall not apply to aeroplanes falling within paragraph (6) hereof.		
(6) Aeroplanes in respect of which there is in force a certificate of airworthiness in the Transport Category (Passenger) or Transport Category (Cargo) and aeroplanes in respect of which application has been made, and not withdrawn or refused for such a certificate		

refused, for such a certificate of airworthiness and which fly

Description of Aircraft	Circumstances of Flight	Scale of Equipment Required
under 'A Conditions' or in respect of which there is in force a certificate of airworthiness in the Special Category:		
(a) (a) for which an individual certificate of airworthiness was first issued (whether in Hong Kong or elsewhere) on or after 1 June 1990 and which have a maximum total weight authorised not exceeding 5,700 kg, are powered by 2 or more turbine engines and are certified to carry more than 9 passengers; or	when flying on any flight	S(iv)
(b) (b) for which an individual certificate of airworthiness was first issued (whether in Hong Kong or elsewhere) on or after 1 June 1990 and which have a maximum total weight authorised exceeding 5,700 kg, but not exceeding 27,000 kg; or	when flying on any flight	S(v)
(c) (c) for which an individual certificate of airworthiness was first issued (whether in Hong Kong or elsewhere) on or after 1 June 1990 and which have a maximum total weight authorised exceeding 27,000 kg	when flying on any flight	S(vi)
(7) Aeroplanes in respect of which there is in force a certificate of airworthiness in the Aerial Work or Private Category and for which an individual certificate of	when flying on any flight	S(vi)

Description of Aircraft	Circumstances of Flight	Scale of Equipment Required
airworthiness was first issued (whether in Hong Kong or elsewhere) on or after 1 June 1990 and which have a maximum total weight authorised exceeding 27,000 kg.		
(8) Aeroplanes:		
(a) (a) which conform to a type first issued with a type certificate (whether in Hong Kong or elsewhere) on or after 1 April 1971 and having a maximum total weight authorised exceeding 27,000 kg and in respect of which there is in force a certificate of airworthiness in the Transport Category (Passenger) or the Transport Category (Cargo); or	when flying on any flight	T
(b) (b) which conform to a type first issued with a type certificate in Hong Kong on or after 1 January 1970 and which have a maximum total weight authorised exceeding 230,000 kg and in respect of which there is in force such a certificate of airworthiness; or	when flying on any flight	T
(c) (c) having a maximum total weight authorised exceeding 27,000 kg which conform to a type first issued with a type certificate on or after 1 April 1971 (or 1 January 1970 in the case of	when flying on any flight	T

Description of Aircraft

Circumstances of Flight

Scale of Equipment Required

an aeroplane having a maximum total authorised weight exceeding 230,000 kg) in respect of which an application has been made, and not withdrawn or refused for such a certificate of airworthiness and which fly under the 'A Conditions' or in respect of which there is in force a certificate of airworthiness in the Special Category.

have a maximum total weight public transport. authorised exceeding 15,000 kg or which in accordance with the certificate of airworthiness in force in respect thereof may carry more than 30 passengers.

Aeroplanes which on all flights for the purpose of X

# (10) Aeroplanes:

- which are when flying by night for the (a) turbo-jets and which purpose of the public transport have maximum of passengers. a total weight authorised exceeding 22,700 kg; or
  - having when flying by night for the Z(i) and (ii) a maximum total purpose of the public transport

Z(i) and (ii)

(b) (b) authorised of passengers exceeding 5,700 kg and which conform type a which a certificate of airworthiness was first applied (whether in Hong Kong or elsewhere) after 30 April 1972 but not including any aeroplane which the opinion in of Governor the identical is in all matters affecting provision

Description of Aircraft Circumstances of Flight Scale of Equipment Required emergency evacuation facilities to an aeroplane for which a certificate of airworthiness was first applied for before that date; or which when flying by night for the Z(i)(c) in accordance with purpose of the public transport the certificate of of passengers airworthiness in force in respect thereof may carry more than 19 passengers; or having when flying for the purpose Z(iii) (d) a maximum total of the public transport of authorised passengers weight exceeding 5,700 kg and which conform type for to a which a certificate of airworthiness was first applied (whether in Hong Kong or elsewhere) after 30 April 1972 but not including any aeroplane which opinion in the Governor of the identical is all matters affecting provision the emergency evacuation facilities to an aeroplane for which a certificate of airworthiness was first applied for before that date; or which are when flying for the purpose Z(iii) turbo-jets and which of the public transport of have a maximum passengers total weight authorised exceeding 22,700 kg; or first issued when flying for the purpose Z(iii) with a type certificate of the public transport of (whether in Hong passengers. Kong or elsewhere)

Description of Aircraft	Circumstances of Flight	Scale of Equipment Required
on or after 1 January 1958 and which in accordance with the certificate of airworthiness in force in respect thereof may carry more than 19 passengers.		
(11) Aeroplanes:		
(a) (a) powered by one or more turbine jets and first issued with a certificate of airworthiness in Hong Kong on or after 1 April 1989;	when flying on any flight	AA
(b) (b) powered by one or more turbine jets and first issued with a certificate of airworthiness in Hong Kong prior to 1 April 1989;	when flying on any flight	AA
by one or more turbine propeller engines and having a maximum total weight authorised exceeding 5,700 kg and first issued with a certificate of airworthiness in Hong Kong on or after 1 April 1989.	when flying on any flight	AA
(12) Aeroplanes:		
	on all flights for the purpose of the public transport of passengers	Y2 (iv)

Description of Aircraft	Circumstances of Flight	Scale of Equipment Required
		Y2 (iv)
		Y2 (iv)
(13) Helicopters and Gyroplanes	(a) (a) flying for purposes other than public transport: and	A(i) and (ii) and B(i)
	(i) when flying by day under Visual Flight Rules with visual ground reference	D
	(ii) when flying by day under Instrument Flight Rules or without visual ground reference	
	(aa) outside controlled airspace	E with E(ii) duplicated
	(bb) within controlled airspace	E with E(ii) and E(iv) duplicated and F with F(iv) for all weights
	(iii) when flying by night  (aa) with visual ground reference  (bb) without visual ground reference	C, E, G(iii) and G(v)

Description of Aircraft	Circumstances of Flight	Scale of Equipment Required
	(aaa) outside controlled airspace	C, E with E(ii) duplicated, G(iii) and G(v)
	(bbb) within controlled airspace	C, E with both E(ii) and E(iv) duplicated, F with F(iv) for all weights, G(iii) and G(v)
	(b) (b) flying for the purpose of public transport; and	A, B(i) and (ii), F(i) and F(iv) for all weights
	(i) when flying by day under Visual Flight Rules with visual ground reference	D
	(ii) when flying by day under Instrument Flight Rules or without visual ground reference	E with both E(ii) and E(iv) duplicated, F(ii), F(iii) and F(v)
	(iii) when flying by night with visual ground reference	
	(aa) in the case of a helicopter or gyroplane having a maximum total weight authorised not exceeding 2,000 kg	C, E and G
	(bb) in the case of a helicopter or gyroplane having a maximum total weight authorised exceeding 2,000 kg	C, E with E(ii) duplicated and either E(iv) duplicated or a radio altimeter, F(ii), F(iii), F(v) and G
	(iv) when flying by night without visual ground reference	C, E with both E(ii) and E(iv) duplicated, F(ii), F(iii), F(v) and G
	(v) when flying over water	E and H
	(aa) in the case of a helicopter or gyroplane classified in its certificate of airworthiness as being of performance group A2 or B when beyond auto-rotational gliding distance from land	

Description of Aircraft	Circumstances of Flight	Scale of Equipment Required
	suitable for an emergency landing	
	(bb) on all flights on which in the event of any emergency occurring during the take-off or during the landing at the intended destination or any likely alternate destination it is reasonably possible that the helicopter or gyroplane would be forced to land onto water	H
	(cc) in the case of a helicopter or gyroplane classified in its certificate of airworthiness as being of performance group A2 when beyond 10 minutes flying time(2) from land	E, H, K and T
	(dd) for more than a total of 3 minutes in any flight	EE
	(ee) in the case of a helicopter or gyroplane classified in its certificate of airworthiness as being of performance group A2 which is intended to fly beyond 10 minutes flying time from land, on a flight in support of or in connection with the offshore exploitation, or exploration of mineral resources (including gas) when the weather report or	I

<sup>(2)</sup> For the purposes of this Table, flying time shall be calculated on the assumption that the aircraft is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

	<u>,                                      </u>	
Description of Aircraft	forecasts available to the commander of the aircraft indicate that the sea temperatrue will be less than plus 10°C during the flight or when any part of the flight is at night	Scale of Equipment Required
	(vi) on all flights which involve manoeuvres on water	H, J and K
	(vii) when flying at a height of 10 000ft or more above mean sea level:	L1 or L2
	(aa) having a certificate of airworthiness first issued (whether in Hong Kong or elsewhere) before 1 January 1989	
	(bb) having a certificate of airworthiness first issued (whether in Hong Kong or elsewhere) on or after 1 January 1989	L2
	(viii) on flights when the weather reports or forecasts available at the aerodrome at the time of departure indicate that conditions favouring ice formation are likely to be met	M
	(ix) on all flights on which the aircraft carries a flight crew of more than one person	N
	(x) on all flights for the purpose of the public transport of passengers	Y2(i), (ii) and (iii)
	(xi) when flying over substantially uninhabited land areas where, in the event of an emergency	U

Description of Aircraft		Circumstances of Flight	Scale of Equipment Required
		landing, tropical conditions are likely to be met	
		(xii) when flying over substantially uninhabited land or other areas where, in the event of any emergency landing, polar conditions are likely to be met	V
(14) Gyroplan	Helicopters & es		
(a)	a maximum total	when flying by night for the purpose of the public transport of passengers	Z(i) and (ii)
(b)	in accordance with	when flying by night for the purpose of the public transport of passengers	Z(i)
(c)		when flying on any flight	S(vii)

a certificate

Description of Aircraft	Circumstances of Flight	Scale of Equipment Required
airworthiness issued in the Transport Category (Passenger or Cargo) and which have either a maximum total weight authorised exceeding 2,730 kg or which may carry more than 9 passengers; or		
(d) (d) which have a certificate of airworthiness issued in the Transport Category (Passenger or Cargo) and helicopters and gyroplanes in respect of which application has been made and not withdrawn or refused for such a certificate of airworthiness and which fly under the "A Conditions" or which have a certificate of airworthiness in the Special Category and		
(i) which have a maximum total weight authorised exceeding 2,730 kg but not exceeding 7,000 kg or which in accordance with the certificate of airworthiness in force in respect thereof may carry more than 9 passengers, or both	when flying on any flight	SS(i) or (iii)
(ii) which have a maximum total weight authorised exceeding 7,000 kg	when flying on any flight	SS(ii) or (iii)

**5.** The scales of equipment indicated in the foregoing Table shall be as follows:  $Scale\ A$ 

- (i) Spare fuses for all electrical circuits the fuses of which can be replaced in flight, consisting of 10 per cent of the number of each rating or three of each rating, whichever is the greater.
- (ii) Maps, charts, codes and other documents and navigational equipment necessary, in addition to any other equipment required under this Order, for the intended flight of the aircraft including any diversion which may reasonably be expected.
- (iii) First aid equipment of good quality, sufficient in quantity, having regard to the number of persons on board the aircraft, and including the following:

Roller bandages, triangular bandages, adhesive plaster, absorbent gauze, cotton wool (or wound dressings in place of the absorbent gauze and cotton wool), burn dressings, safety pins;

Haemostatic bandages or tourniquets, scissors;

Antiseptic, analgesic and stimulant drugs;

Splints, in the case of aeroplanes the maximum total weight authorised of which exceeds 5,700 kg;

A handbook on first aid.

- (iv) In the case of a flying machine used for the public transport of passengers in which, while the flying machine is at rest on the ground, the sill of any external door intended for the disembarkation of passengers, whether normally or in an emergency:
  - (a) is more than 1.82 metres from the ground when the undercarriage of the machine is in the normal position for taxying; or
  - (b) would be more than 1.82 metres from the ground if the undercarriage or any part thereof should collapse, break or fail to function;

apparatus readily available for use at each door consisting of a device or devices which will enable passengers to reach the ground safely in an emergency while the flying machine is on the ground, and can be readily fixed in position for use.

## Scale AA

An altitude alerting system capable of alerting the pilot upon approaching a preselected altitude in either ascent or descent, by a sequence of visual and aural signals in sufficient time to establish level flight at that preselected altitude, and when deviating above or below that preselected altitude, by a visual and an aural signal:

Provided that if the system becomes unserviceable, the aircraft may fly or continue to fly, until it first lands at a place at which it is reasonably practicable for the system to be repaired or replaced.

## Scale B

(i) (a) If the maximum total weight authorised of the aircraft is 2,730 kg or less, for every pilot's seat and for any seat situated alongside a pilot's seat, a safety belt with one diagonal shoulder strap or a safety harness:

Provided that the Governor may permit a safety belt without a diagonal shoulder strap to be fitted if he is satisfied that it is not reasonably practicable to fit a safety belt with one diagonal shoulder strap or a safety harness.

(b) If the maximum total weight authorised of the aircraft exceeds 2,730 kg, a safety harness for every pilot's seat and for any seat situated alongside a pilot's seat, in place of the safety belt with one diagonal shoulder strap referred to under subparagraph (a):

Provided that the Governor may permit a safety belt with one diagonal shoulder strap to be fitted if he is satisfied that it is not reasonably practicable to fit a safety harness.

- (c) For every seat in use (not being a seat referred to in sub-paragraphs (a), (b), (e) and (f)) a safety belt with or without one diagonal shoulder strap or a safety harness.
- (d) In addition and to be attached to or secured by the equipment required in subparagraph (c) above, a child restraint device for every child under the age of 2 years on board.
- (e) On all flights for the public transport of passengers by aircraft, for each seat for use by cabin attendants who are required to be carried under this Order, a safety harness.
- (f) On all flights in aeroplanes the maximum total weight authorised of which does not exceed 5,700 kg which in accordance with the certificate of airworthiness in force thereof is not capable of seating more than 9 passengers (otherwise than in seats referred to under sub-paragraphs (a) and (b)), a safety belt with one diagonal shoulder strap or a safety harness for each seat intended for use by a passenger:

Provided that the provisions of this sub-paragraph shall not apply to aeroplanes in respect of which a certificate of airworthiness was first issued (whether in Hong Kong or elsewhere) before 1 February 1989.

- (ii) If the commander cannot, from his own seat, see all the passengers' seats in the aircraft, a means of indicating to the passengers that seat belts should be fastened.
- (iii) A safety harness for every seat in use:

Provided that in the case of an aircraft carrying out aerobatic manoeuvres consisting only of erect spinning, the Governor may permit a safety belt with one diagonal shoulder strap to be fitted if he is satisfied that such restraint is sufficient for the carrying out of erect spinning in that aircraft and that it is not reasonably practicable to fit a safety harness in that aircraft.

### Scale C

- (i) Equipment for displaying the lights required by the Rules of the Air;
- (ii) Electrical equipment, supplied from the main source of supply in the aircraft, to provide sufficient illumination to enable the flight crew properly to carry out their duties during flight;
- (iii) Unless the aircraft is equipped with radio, devices for making the visual signal specified in the Rules of the Air as indicating a request for permission to land.

### Scale D

- (i) (a) In the case of a helicopter or gyroplane, a slip indicator;
  - (b) In the case of any other flying machine either:
    - (aa) a turn indicator and a slip indicator; or
    - (bb) a gyroscopic bank and pitch indicator and a gyroscopic direction indicator;
- (ii) A sensitive pressure altimeter adjustable for any sea level barometric pressure which the weather report or forecasts available to the commander of the aircraft indicate is likely to be encountered during the intended flight.

# Scale E

- (i) (a) In the case of a helicopter or gyroplane, a slip indicator;
  - (b) In the case of any other flying machine, a turn indicator and a slip indicator;

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- (ii) A gyroscopic bank and pitch indicator;
- (iii) A gyroscopic direction indicator;
- (iv) A sensitive pressure altimeter adjustable for any sea level barometric pressure which the weather report or forecasts available to the commander of the aircraft indicate is likely to be encountered during the intended flight:

Provided that any aircraft may, at the option of the operator, be equipped with an additional gyroscopic bank and pitch indicator in lieu of the turn indicator referred to in (i) of this Scale. *Scale EE* 

A radio altimeter with an audio voice warning operating below a preset height and a visual warning capable of operating at a height selectable by the pilot.

### Scale F

- (i) A timepiece indicating the time in hours, minutes and seconds;
- (ii) A means of indicating whether the power supply to the gyroscopic instrument is adequate;
- (iii) A rate of climb and descent indicator;
- (iv) If the maximum total weight authorised of the aircraft exceeds 5,700 kg a means of indicating outside air temperature;
- (v) If the maximum total weight authorised of the aircraft exceeds 5,700 kg two air speed indicators.

## Scale G

- (i) In the case of an aircraft other than a helicopter or gyroplane landing lights consisting of two single filament lamps, or one dual filament lamp with separately energised filaments;
- (ii) An electrical lighting system to provide illumination in every passenger compartment;
- (iii) (a) One electric torch for each member of the crew of the aircraft; or
  - (b) (aa) one electric torch for each member of the flight crew of the aircraft; and
    - (bb) at least one electric torch affixed adjacent to each floor level exit intended for the disembarkation of passengers whether normally or in an emergency, provided that such torches shall;
      - (aaa) be readily accessible for use by the crew of the aircraft at all times; and
      - (bbb) number in total not less than the minimum number of cabin attendants required to be carried with a full passenger complement;
- (iv) In the case of an aircraft other than a helicopter or gyroplane of which the maximum total weight authorised exceeds 5,700 kg, means of observing the existence and build up of ice on the aircraft;
- (v) (a) In the case of a helicopter or gyroplane in respect of which there is in force a certificate of airworthiness designating the helicopter or gyroplane as being of performance group A, either:
  - (aa) two landing lights both of which are adjustable so as to illuminate the ground in front of and below the helicopter or gyroplane and one of which is adjustable so as to illuminate the ground on either side of the helicopter or gyroplane; or
  - (bb) one landing light or, if the maximum total weight authorised of the helicopter or gyroplane exceeds 5,700 kg, one dual filament landing light with separately energised filaments, or two single filament lights, each of which is

adjustable so as to illuminate the ground in front of and below the helicopter or gyroplane, and two parachute flares;

- (b) In the case of a helicopter or gyroplane in respect of which there is in force a certificate of airworthiness designating the helicopter or gyroplane as being of performance group B, either:
  - (aa) one landing light and 2 parachute flares; or
  - (bb) if the maximum total weight authorised of the helicopter or gyroplane exceeds 5,700 kg, either one dual filament landing light with separately energised filaments or 2 single filament landing lights, and 2 parachute flares.

### Scale H

For each person on board, a lifejacket equipped with a whistle and waterproof torch:

Provided that lifejackets constructed and carried solely for use by children under three years of age need not be equipped with a whistle.

#### Scale I

A survival suit for each member of the crew.

#### Scale J

- (i) Additional flotation equipment, capable of supporting one-fifth of the number of persons on board, and provided in a place of stowage accessible from outside the flying machine;
- (ii) Parachute distress rocket signals capable of making, from the surface of the water, the pyrotechnical signal of distress specified in the Rules of the Air and complying with Part I of Schedule 8 to the Merchant Shipping (Safety) (Life-Saving Appliances) (Ships Built on or after 1 July 1986) Regulations 1991; made under the Merchant Shipping (Safety) Ordinance (Cap 369);
- (iii) A sea anchor and other equipment necessary to facilitate mooring, anchoring or manoeuvering the flying machine on water, appropriate to its size, weight and handling characteristics.

## Scale K

- (i) (a) In the case of a flying machine, other than a helicopter or gyroplane carrying 20 or more persons, liferafts sufficient to accommodate all persons on board;
  - (b) In the case of a helicopter or gyroplane carrying 20 or more persons, a minimum of 2 liferafts sufficient together to accommodate all persons on board.

Each liferaft shall contain the following equipment:

- (a) means for maintaining buoyancy;
- (b) a sea anchor;
- (c) life-lines, and means of attaching one liferaft to another;
- (d) paddles or other means of propulsion;
- (e) means of protecting the occupants from the elements;
- (f) a waterproof torch;
- (g) marine type pyrotechnical distress signals;
- (h) means of making sea water drinkable, unless the full quantity of fresh water is carried as specified in sub-paragraph (i);
- (i) for each 4 or proportion of 4 persons the lifecraft is designed to carry:

100 grammes of glucose toffee tablets;

½ litre of fresh water in durable containers:

Provided that in any case in which it is not reasonably practicable to carry the quantity of water above specified as large a quantity of fresh water as is reasonably practicable in the circumstances may be substituted. In no case however shall the quantity of water carried be less than is sufficient, when added to the amount of fresh water capable of being produced by means of the equipment specified in subparagraph (h) to provide ½ litre of water for each 4 or proportion of 4 persons the liferaft is designed to carry.

(j) first aid equipment;

Items (f) to (j) inclusive shall be contained in a pack.

(ii) The number of survival beacon radio apparatus carried when the aircraft is carrying the number of liferafts specified in column 1 of the following Table shall be not less than the number specified in, or calculated in accordance with column 2.

#### **TABLE**

Column 1	Column 2
Not more than 8 liferafts.	2 survival beacon radio apparatus.
For every additional 4 or proportion of liferafts.	1 additional survival beacon radio apparatus.

(iii) In the case of a helicopter or gyroplane, an emergency beacon which is automatically deployed and activated in the event of a crash.

## Scale L1

#### Part 1

- (i) In every flying machine which is provided with means for maintaining a pressure greater than 700 millibars throughout the flight in the flight crew compartment and in the compartments in which the passengers are carried:
  - (a) a supply of oxygen sufficient, in the event of failure to maintain such pressure, occurring in the circumstances specified in columns 1 and 2 of the Table set out in Part II of this Scale, for continuous use, during the periods specified in column 3 of the said Table, by the persons for whom oxygen is to be provided in accordance with column 4 of that Table; and
  - (b) in addition, in every case where the flying machine flies above flight level 350, a supply of oxygen in a portable container sufficient for the simultaneous first aid treatment of 2 passengers,

together with suitable and sufficient apparatus to enable such persons to use the oxygen.

- (ii) In any other flying machine:
  - (a) a supply of oxygen sufficient for continuous use by all the crew other than the flight crew, and if passengers are carried, by 10% of the number of passengers, for any period exceeding 30 minutes during which the flying machine flies above flight level 100 but not above flight level 130 and the flight crew shall be supplied with oxygen sufficient for continuous use for any period during which the flying machine flies above flight level 100; and
  - (b) a supply of oxygen sufficient for continuous use by all persons on board for the whole time during which the flying machine flies above flight level 130,

together with suitable and sufficient apparatus to enable such persons to use the oxygen.

(iii) The quantity of oxygen required for the purpose of complying with paragraphs (i) and (ii) of this Part of this Scale shall be computed in accordance with the information and instructions relating thereto specified in the operations manual relating to the aircraft pursuant to Item (vi) of Part A of Schedule 11 to this Order.

Part II

Column 1 Vertical displacement of the flying machine in relation to flight levels	Column 2 Capability of flying machine to descend (where relevant)	Column 3 Period of supply of oxygen	Column 4 Persons for whom oxygen is to be provided
Above flight level 100	_	30 minutes or the period specified at A hereunder whichever is the greater	In addition to any passengers for whom oxygen is provided as specified below, all the crew
	{ Flying machine is either flying at or below flight level 150 or is capable of descending and continuing to destination as specified at X hereunder	30 minutes or the period specifed at A hereunder whichever is the greater	10 per cent of number of passengers
Above flight level 100 but not above flight level 300	Flying machine is flying above flight level 150 and is not	{ 10 minutes or the period specified at B hereunder whichever is the greater	All passengers
		and in addition	
	so capable	{ 30 minutes or the period specified at C hereunder whichever is the greater	10 per cent of number of passengers
Above flight level 300 but not above flight level 350	{ Flying machine is capable of descending and continuing to destination as specified at Y hereunder	30 minutes or the period specified at A hereunder whichever is the greater	15 per cent of number of passengers
	{ Flying machine is not so capable	{ 10 minutes or the period specified at B hereunder	All passengers

Column 1 Vertical displacement of the flying machine in relation to flight levels	Column 2 Capability of flying machine to descend (where relevant)	Column 3 Period of supply of oxygen	Column 4 Persons for whom oxygen is to be provided
		whichever is the greater	
		and in	addition
		{ 30 minutes or the period specified at C hereunder whichever is the greater	15 per cent of number of passengers
		{ 10 minutes or the period specified at B hereunder whichever is the greater	All passengers
Above flight level 350	_	and in	addition
550		{ 30 minutes or the period specified at C hereunder whichever is the greater	15 per cent of number of passengers

- The whole period during which, after a failure to maintain a pressure greater than 700 millibars in the control compartment and in the compartments in which passengers are carried has occurred, the flying machine flies above flight level 100.
- В
- The whole period during which, after a failure to maintain such pressure has occurred, the flying machine flies above flight level 150. The whole period during which, after a failure to maintain such pressure has occurred, the flying machine flies above flight level 100, but not above flight C level 150.
- The flying machine is capable, at the time when a failure to maintain such X pressure occurs, of descending in accordance with the emergency descent procedure specified in the relevant flight manual and without flying below the minimum altitudes for safe flight specified in the operations manual relating to the aircraft, to flight level 150 within 6 minutes, and of continuing at or below that flight level to its place of intended destination or any other place at which a
- safe landing can be made. The flying machine is capable, at the time when a failure to maintain such pressure occurs, of descending in accordance with the emergency descent procedure specified in the relevant flight manual and without flying below the minimum altitudes for safe flight specified in the operations manual relating to the aircraft, to flight level 150 within 4 minutes, and of continuing at or below that flight level to its place of intended destination or any other place at which a safe landing can be made.

#### Scale L2

A supply of oxygen and the associated equipment to meet the requirements set out in Parts I and II of this scale. The duration for the purposes of this scale shall be:

that calculated in accordance with the operations manual prior to the commencement of the flight, being the period or periods which it is reasonably anticipated that the aircraft

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will be flown in the circumstances of the intended flight at a height where the said requirements apply and in calculating the said duration account shall be taken of:

- (a) in the case of pressurised aircraft, the possibility of depressurisation when flying above flight level 100;
- (b) the possibility of failure of one or more of the aircraft engines;
- (c) restrictions due to required minimum safe altitude;
- (d) fuel requirement; and
- (e) the performance of the aircraft; or
- (ii) the period or periods during which the aircraft is actually flown in the circumstances specified in the said Parts;

whichever is the greater.

## Part I

Unpressurised aircraft

(i) When flying at or below flight level 100:

Ni

(ii) When flying above flight level 100 but not exceeding flight level 120:

	Supply fo	r		Duration
	(a)	(a) crew	Members of the flight	Any period during which the aircraft flies above flight level 100.
	(b)	. /	Cabin attendants and cent of passengers	For any continuous period exceeding 30 minutes during which the aircraft flies above flight level 100 but not exceeding flight level 120, the duration shall be the period by which 30 minutes is exceeded.
(iii)	When flying	ng abov	e flight level 120:	
	Supply fo	r		Duration
	(a)	(a) crew	Members of the flight	Any period during which the aircraft flies above flight level 120.
	(b)	` /	Cabin attendants and sengers	Any period during which the aircraft flies above flight level 120.

# Part II

Pressurised aircraft

(i) When flying at or below flight level 100:

Nil

(ii) When flying above flight level 100 but not exceeding flight level 250:

Supply for	<i>y•</i>		Duration
(a)	(a)	Members of the flight	30 minutes or whenever the cabin
(	crew		pressure altitude exceeds 10,000 ft,
			whichever is the greater

(iii)

Supply for	Duration	
(b) (b) Cabin attendants and 10 per cent of passengers	(aa) When the aircraft is capable of descending and continuing to its destination as specified at A hereunder, 30 minutes or whenever the cabin pressure altitude exceeds 10,000 ft, whichever is the greater	
	(bb) When the aircraft is not so capable, whenever the cabin pressure altitude is greater than 10,000 ft, but does not exceed 12,000 ft	
(c) (c) Cabin attendants and passengers	(aa) When the aircraft is capable of descending and continuing to its destination as specified at A hereunder, no requirement other than that at (ii) (b) (aa) of this part of this scale	
	(bb) When the aircraft is not so capable and the cabin pressure altitude exceeds 12,000 ft, the duration shall be the period when the cabin pressure altitude exceeds 12,000 ft or 10 minutes, whichever is the greater	
When flying above flight level 250:		
Supply for	Duration	
	2 hours or whenever the cabin pressure altitude exceeds 10,000 ft, whichever is the greater	
(b) (b) Cabin attendants	Whenever the cabin pressure altitude exceeds 10,000 ft, and a portable supply for 15 minutes	
(c) (c) 10 per cent of passengers	Whenever the cabin pressure altitude exceeds 10,000 ft but does not exceed 12,000 ft	
(d) (d) 30 per cent of passengers	Whenever the cabin pressure altitude exceeds 12,000 ft but does not exceed 15,000 ft	
without flying below the minimum the operations manual relating to the 5 minutes and of continuing at or h	he time when a failure to maintain tending in accordance with the difficult in the relevant flight manual and a altitudes for safe flight specified in the aircraft, to flight level 120 within the below that flight level to its place of blace at which a safe landing can be	

Sup	ply for	•	Duration
	(e)	(e) All passengers	If the cabin pressure altitude exceeds 15,000 ft, the duration shall be the period when the cabin pressure altitude exceeds 15,000 ft or 10 minutes, whichever is the greater
	t f t f		Whenever, after decompression, the cabin pressure altitude exceeds 8,000 ft
A	the o	perations manual relating to to nutes and of continuing at or lead destination or any other p	he time when a failure to maintain tending in accordance with the cified in the relevant flight manual and a altitudes for safe flight specified in the aircraft, to flight level 120 within below that flight level to its place of place at which a safe landing can be

## Scale M

Equipment to prevent the impairment through ice formation of the functioning of the controls, means of propulsion, lifting surfaces, windows or equipment of the aircraft so as to endanger the safety of the aircraft.

#### Scale N

An intercommunication system for use by all members of the flight crew and including microphones, not of a hand-held type, for use by the pilot and flight engineer (if any).

# Scale O

A radar set capable of giving warning to the pilot in command of the aircraft and to the co-pilot of the presence of cumulo-nimbus clouds and other potentially hazardous weather conditions: Provided that a flight may commence if the set is unserviceable or continue if the set becomes unserviceable thereafter:

- (a) so as to give the warning only to one pilot, so long as the aircraft is flying only to the place at which it first becomes reasonably practicable for the set to be repaired; or
- (b) when the weather report or forecasts available to the commander of the aircraft indicate that cumulo-nimbus clouds or other potentially hazardous weather conditions, which can be detected by the set when in working order, are unlikely to be encountered on the intended route or any planned diversion therefrom or the commander has satisfied himself that any such weather conditions will be encountered in daylight and can be seen and avoided, and the aircraft is in either case operated throughout the flight in accordance with any relevant instructions given in the operations manual.

#### Scale P

A flight data recorder which is capable of recording, by reference to a time-scale, the following data:

- (a) indicated airspeed;
- (b) indicated altitude;

- (c) vertical acceleration;
- (d) magnetic heading;
- (e) pitch attitude, if the equipment provided in the aeroplane is of such a nature as to enable this item to be recorded;
- (f) engine power, if the equipment provided in the aeroplane is of such a nature as to enable this item to be recorded;
- (g) flap position;
- (h) roll attitude, if the equipment provided in the aeroplane is of such a nature as to enable this item to be recorded:

Provided that any aeroplane having a maximum total weight authorised not exceeding 11,400 kg may be provided with:

- (i) a flight data recorder capable of recording the data described in sub-paragraphs (a) to (h) of this Scale; or
- (ii) a 4 channel cockpit voice recorder.

In addition, on all flights by turbine-powered aeroplanes having a maximum total weight authorised exceeding 11,400 kg, a 4 channel cockpit voice recorder.

The flight data recorder and cockpit voice recorder referred to above shall be so constructed that the record would be likely to be preserved in the event of an accident to the aeroplane:

Provided that an aeroplane shall not be required to carry the said equipment, if before takeoff the equipment is found to be unserviceable and the aircraft flies in accordance with arrangements approved by the Governor.

#### Scale O

If the maximum total weight authorised of the aeroplane exceeds 5,700 kg and it was first registered, whether in Hong Kong or elsewhere, on or after 1 June 1965, a door between the flight crew compartment and any adjacent compartment to which passengers have access, which door shall be fitted with a lock or bolt capable of being worked from the flight crew compartment.

## Scale R1

- (i) Equipment sufficient to protect the eyes, nose and mouth of the pilot in command of the aircraft from the effects of smoke and noxious gases for a period of not less than 15 minutes;
- (ii) Portable equipment sufficient to protect the eyes, nose and mouth of one other member of the crew of the aircraft from the effects of smoke and noxious gases for a period of not less than 8 minutes; and
- (iii) Equipment sufficient to protect from the effects of smoke and noxious gases the eyes of all members of the flight crew of the aircraft whose eyes are not adequately protected by other equipment.

## Scale R2

(i) (a) In respect of aeroplanes having a maximum total weight authorised exceeding 5,700 kg, equipment sufficient to protect the eyes, nose and mouth of all members of the flight crew required to be carried by virtue of Article 18 of this Order for a period of not less than 15 minutes and, in addition, where the minimum flight crew required as aforesaid is more than one and a cabin attendant is not required to be carried by virtue of Article 18 of this Order, portable equipment sufficient to protect the eyes, nose and mouth of one member of the flight crew for a period of not less than 15 minutes;

(b) In respect of aeroplanes having a maximum total weight authorised not exceeding 5,700 kg, the equipment specified in (i)(a) of this Scale:

Provided that in the case of such aeroplanes restricted by virtue of the operator's operations manual to flight at or below flight level 250 and capable of descending as specified at A hereunder such equipment shall be sufficient to protect the eyes only.

- (ii) (a) In respect of aeroplanes having a maximum total weight authorised exceeding 5,700 kg, portable equipment to protect the eyes, nose and mouth of all cabin attendants required to be carried by virtue of Article 18 of this Order for a period of not less than 15 minutes;
  - (b) In respect of aeroplanes having a maximum total weight authorised not exceeding 5,700 kg, the equipment specified in (ii)(a) of this Scale:

Provided that this requirement shall not apply to such aeroplanes restricted by virtue of the operator's operations manual to flight at or below flight level 250 and capable of descending as specified at A hereunder.

A The aeroplane is capable of descending in accordance with the emergency descent procedure specified in the relevant flight manual and without flying below the minimum altitudes for safe flight specified in the operations manual relating to the aeroplane, to flight level 100 within 4 minutes and of continuing at or below that flight level to its place of intended destination or any other place at which a safe landing can be made.

## Scale S

A flight recording system comprising:

- (i) either a 4 channel cockpit voice recorder or a flight data recorder capable of recording by reference to a time scale the data required to determine the following matters accurately in respect of the aeroplane: the flight path, altitude and the basic lift, thrust and drag forces acting upon it;
- (ii) a 4 channel cockpit voice recorder and a flight data recorder capable of recording by reference to a time scale the data required to determine the following matters accurately in respect of the aeroplane; the information specified in paragraph (i) of this Scale together with use of VHF transmitters;
- (iii) a 4 channel cockpit voice recorder and a flight data recorder capable of recording by reference to a time scale the data required to determine the following matters accurately in respect of the aeroplane: the flight path, attitude, the basic lift, thrust and drag forces acting upon it, the selection of high lift devices (if any) and airbrakes (if any), the position of primary flying control and pitch trim surfaces, outside air temperature, instrument landing system deviations, use of automatic flight control systems, use of VHF transmitters, radio altitude (if any), the level or availability of essential AC electricity supply and cockpit warnings relating to engine fire and engine shut-down, cabin pressurisation, presence of smoke and hydraulic/pneumatic power supply;
- (iv) either a cockpit voice recorder and a flight data recorder or a combined cockpit voice recorder/flight data recorder capable in either case of recording by reference to a time scale the data required to determine the following matters accurately in respect of the aeroplane: the flight path, speed, attitude, engine power, outside air temperature, configuration of lift and drag devices, use of VHF transmitters and use of automatic flight control systems;
- (v) a cockpit voice recorder and a flight data recorder capable of recording by reference to a time scale the data required to determine the following matters accurately in respect of the aeroplane: the flight path, speed, altitude, engine power, outside air temperature,

- configuration of lift and drag devices, use of VHF transmitters and use of automatic flight control systems;
- (vi) a cockpit voice recorder and a flight data recorder capable of recording by reference to a time scale the data required to determine the following matters accurately in respect of the aeroplane: the flight path, speed, altitude, engine power, outside air temperature, instrument landing system deviations, marker beacon passage, radio altitude, configuration of the landing gear and lift and drag devices, position of primary flying control and pitch trim surfaces, use of automatic flight control systems, use of VHF transmitters, ground speed/drift angle or latitude/longitude if the navigational equipment provided in the aeroplane is of such a nature as to enable this information to be recorded with reasonable practicability, cockpit warnings relating to engine fire, engine shut-down, cabin pressurisation, presence of smoke, essential AC electricity supply, hydraulic/pneumatic power supply, ground proximity and stalling;
- (vii) in respect of helicopters having a maximum total weight authorised exceeding 2,730 kg or a seating capacity exceeding 9 passengers, a 4 channel cockpit voice recorder which has attached to it an under-water sonar location device.

The cockpit voice recorder or flight data recorder or combined cockpit voice recorder/flight data recorder, as the case may be, shall be so constructed that the record would be likely to be preserved in the event of an accident:

Provided that an aircraft shall not be required to carry the said equipment, if before take-off the equipment is found to be unserviceable and the aircraft flies in accordance with arrangements approved by the Governor.

#### Scale SS

- (i) A 4 channel cockpit voice recorder capable of recording and retaining the data recorded during at least the last 30 minutes of its operation and a flight data recorder capable of recording and retaining the data recorded during at least the last 8 hours of its operation being the data required to determine by reference to a time scale the following matters accurately in respect of the helicopter or gyroplane:
  - (a) flight path;
  - (b) speed;
  - (c) altitude;
  - (d) engine power;
  - (e) main rotor speed;
  - (f) outside air temperature;
  - (g) position of pilot's primary flight controls;
  - (h) use of VHF transmitters;
  - (j) use of automatic flight controls (if any);
  - (k) use of stability augmentation system (if any);
  - (l) cockpit warnings relating to the master warning system; and
  - (m) selection of hydraulic system and cockpit warnings of failure of essential hydraulic systems.
- (ii) A 4 channel cockpit voice recorder capable of recording and retaining the data recorded during at least the last 30 minutes of its operation and a flight data recorder capable of recording and retaining the data recorded during at least the last 8 hours of its operation being the data required to determine by reference to a time scale the information specified

in paragraph (i) of this Scale together with the following matters accurately in respect of the helicopter or gyroplane:

- (n) landing gear configuration;
- (p) indicated sling load force if an indicator is provided in the helicopter or gyroplane of such a nature as to enable this information to be recorded with reasonable practicability;
- (q) radio altitude;
- (r) instrument landing system deviations;
- (s) marker beacon passage;
- (t) ground speed/drift angle or latitude/longitude if the navigational equipment provided in the helicopter or gyroplane is of such a nature as to enable this information to be recorded with reasonable practicability; and
- (u) main gear box oil temperature and pressure.
- (iii) (a) A combined cockpit voice recorder/flight data recorder which meets the following requirements:
  - (aa) in the case of a helicopter or gyroplane which is otherwise required to carry a flight data recorder specified at paragraph (i) of this Scale the flight data recorder shall be capable of recording the data specified therein and retaining it for the duration therein specified;
  - (bb) in the case of a helicopter or gyroplane which is otherwise required to carry a flight data recorder specified at paragraph (ii) of this Scale, the flight data recorder shall be capable of recording the data specified therein and retaining it for the duration therein specified;
  - (cc) the cockpit voice recorder shall be capable of recording and retaining at least the last hour of cockpit voice recording information on not less than three separate channels.
  - (b) In any case when a combined cockpit voice recorder/flight data recorder specified at paragraph (iii)(a) of this Scale is required to be carried by or under this Order, the flight data recorder shall be capable of retaining as protected data the data recorded during at least the last 5 hours of its operation or the maximum duration of the flight, whichever is the greater. It shall also be capable of retaining additional data as unprotected data for a period which together with the period for which protected data is required to be retained amounts to a total of 8 hours:

Provided that the flight data recorder need not be capable of retaining the said additional data if additional data is retained which relates to the period immediately preceding the period to which the required protected data relates or for such other period or periods that the Governor may permit pursuant to Article 37 of this Order and the additional data is retained in accordance with arrangements approved by the Governor.

With the exception of flight data which it is expressly stated above may be unprotected, the cockpit voice recorder, flight data recorder or combined cockpit voice recorder and flight data recorder, as the case may be, shall be so constructed and installed that the record (herein referred to as 'protected data') would be likely to be preserved in the event of an accident and each cockpit voice recorder, flight data recorder or combined cockpit voice recorder/flight data recorder required to be carried on the helicopter or gyroplane shall have attached an automatically activated underwater sonar location device or an emergency locator radio transmitter as appropriate:

Provided that a helicopter or gyroplane shall not be required to carry the said equipment if, before take-off, the equipment is found to be unserviceable and the aircraft flies in accordance with arrangements approved by the Governor.

#### Scale T

An underwater sonar location device except in respect of those helicopters or gyroplanes which have a device attached to a cockpit voice recorder in accordance with Scale S or are required to carry equipment in accordance with Scale SS.

#### Scale U

- (a) 1 survival beacon radio apparatus;
- (b) marine type pyrotechnical distress signals;
- (c) for each 4 or proportion of 4 persons on board, 100 grammes of glucose toffee tablets;
- (d) for each 4 or proportion of 4 persons on board, ½ litre of fresh water in durable containers;
- (e) first aid equipment.

#### Scale V

- (a) 1 survival beacon radio apparatus;
- (b) marine type pyrotechnical distress signals;
- (c) for each 4 or proportion of 4 persons on board, 100 grammes of glucose toffee tablets;
- (d) for each 4 or proportion of 4 persons on board, ½ litre of fresh water in durable containers;
- (e) first aid equipment;
- (f) for every 75 or proportion of 75 persons on board, 1 stove suitable for use with aircraft fuel:
- (g) 1 cooking utensil, in which snow or ice can be melted;
- (h) 2 snow shovels;
- (i) 2 ice saws;
- (j) single or multiple sleeping-bags, sufficient for the use of one-third of all persons on board:
- (k) 1 Arctic suit for each member of the crew of the aircraft.

#### Scale W

Cosmic radiation detection equipment calibrated in millirems per hour and capable of indicating the action and alert levels of radiation dose rate:

Provided that an aircraft shall not be required to carry the said equipment if before take-off the equipment is found to be unserviceable and it is not reasonably practicable to repair or replace it at the aerodrome of departure and the radiation forecast available to the commander of the aircraft indicates that hazardous radiation conditions are unlikely to be encountered by the aircraft on its intended route or any planned diversion therefrom.

#### Scale X

Equipment capable of giving warning to the pilot of the potentially hazardous proximity of ground or water:

Provided that if the equipment becomes unserviceable, the aircraft may fly or continue to fly until it first lands at a place at which it is reasonably practicable for the equipment to be repaired or replaced.

#### Scale Y1

- (i) If the aircraft has a total seating capacity of not less than 60 and not exceeding 149 passengers, one portable battery-powered megaphone capable of conveying instructions to all persons in the passenger compartment and readily available for use by a member of the crew.
- (ii) If the aircraft has a total seating capacity exceeding 149 passengers, 2 portable battery-powered megaphones together capable of conveying instructions to all persons in the passenger compartments and readily available for use by a member of the crew.

#### Scale Y2

- (i) If the aircraft may in accordance with its certificate of airworthiness carry more than 19 and less than 100 passengers, one portable battery-powered megaphone capable of conveying instructions to all persons in the passenger compartment and readily available for use by a member of the crew.
- (ii) If the aircraft may in accordance with its certificate of airworthiness carry more than 99 and less than 200 passengers, 2 portable battery-powered megaphones together capable of conveying instructions to all persons in the passenger compartment and each readily available for use by a member of the crew.
- (iii) If the aircraft may in accordance with its certificate of airworthiness carry more than 199 passengers, 3 portable battery-powered megaphones together capable of conveying instructions to all persons in the passenger compartment and each readily available for use by a member of the crew.
- (iv) If the aircraft may in accordance with its certificate of airworthiness carry more than 19 passengers:
  - (a) a public address system; and
  - (b) an interphone system of communication between members of the flight crew and the cabin attendants.

#### Scale Z

- (i) An emergency lighting system to provide illumination in the passenger compartment sufficient to facilitate the evacuation of the aircraft notwithstanding the failure of the lighting systems specified in paragraph (ii) of Scale G.
- (ii) An emergency lighting system to provide illumination outside the aircraft sufficient to facilitate the evacuation of the aircraft.
- (iii) An emergency floor path lighting system in the passenger compartment sufficient to facilitate the evacuation of the aircraft notwithstanding the failure of the lighting systems specified in paragraph (ii) of Scale G:

Provided that if the equipment specified in this sub-paragraph (iii) becomes unserviceable the aircraft may fly or continue to fly in accordance with arrangements approved by the Governor.

#### SCHEDULE 6 Article 14

Radio and Radio Navigation Equipment to be carried in Aircraft

1. Every aircraft shall be provided, when flying in the circumstances specified in the first column of the Table set forth in paragraph 2 of this Schedule, with the scales of equipment respectively indicated in that Table:

Provided that, if the aircraft is flying in a combination of such circumstances, the scales of equipment shall not on that account be required to be duplicated.

2.

				Tabl	e			
Aircraft and Circumst of		Equipme	nt Required					
Flight								
1 118111	A	В	C	D	E	F	G	Н
(1) All aircraft within Hong Kong:	Α				E**	F**		
(a)	when flying under Instrument Flight Rules within controlled airspace							
	n A(b) flying within any airspace in respect of which special rules are prescribed by the Rules of the Air in relation to a							

<sup>\*</sup> Unless the appropriate air traffic control unit otherwise permits in relation to the particular flight and provided that the aircraft complies with any instructions which the air traffic control unit may give in the particular case.

Aircraft and Circums of Flight		Equipment	Required					
riigiit	A	В	C	D	Е	F	G	Н
	particular aerodrome, so as to require two-way radio communica with that aerodrome		C	D	E	Г	U	п
w(b)	making an approach to landing at an aerodrome notified for the purpose of this sub-paragraph.						G**	
(2) Al aircraft (other than gliders) within Hong Kong:	when flying at				E**	F**		
	or above							

Unless the appropriate air traffic control unit otherwise permits in relation to the particular flight and provided that the aircraft complies with any instructions which the air traffic control unit may give in the particular case.

Aircraft Scand Circumstance of Flight	ale of Equipm	ent Require	ed				
A	В	С	D	Е	F	G	Н
fligh level 245	t						
bein, airsp in respo of whice spec rules are	g in ace ied oses graph, g ace ect h ial			E**			
w(kg)n (c flyin at or abov fligh level	g e t			E**			
(3) All A aircraft		C	D				Н

<sup>\*</sup> Unless the appropriate air traffic control unit otherwise permits in relation to the particular flight and provided that the aircraft complies with any instructions which the air traffic control unit may give in the particular case.

Aircraft and Circums of		of Equipme	ent Require	d				
Flight	A	В	С	D	Е	F	G	Н
registere in Hong Kong, wherever they may be:  (a)	d g r	i ent		D	L	ı	- C	
	ma an app to	king broach ding						
(ii) on all oth			С				Н	
m( <b>H</b> )	i- A(b) engined aircraft when flying for the purpose of public transport under Visual Flight Rules	i.						Н

<sup>\*</sup> Unless the appropriate air traffic control unit otherwise permits in relation to the particular flight and provided that the aircraft complies with any instructions which the air traffic control unit may give in the particular case.

Aircraft and Circums of Flight			Equipm	ent Requi	red				
1 Hgiit	A		В	C	D	Е	F	G	Н
singdi	e- A(c engi aircr whe flyir for the purp of publ trans unde Visu Fligl Rule	ned raft n ag oose ic sport er al ht es: ) over a route on whic	h gation ted y						
		landı	narks.						
(ii) on all oth		s.	В						
Provided that aircraft which come within paragrap (3)(b) and (3) (c) above	hs		В						

<sup>\*</sup> Unless the appropriate air traffic control unit otherwise permits in relation to the particular flight and provided that the aircraft complies with any instructions which the air traffic control unit may give in the particular case.

and Circumstances of	of Equipme	nt Require	d				
Flight A	В	С	D	Е	F	G	Н
solely by virtue of the provisions of Article 98(6)(a) (iii) may carry instead of the requirements of the said paragraphs (3)(b) and (3) (c): (aa) over  a route on which navigation is not effected solely by visual reference to landmarks							
(bb) over water, beyond gliding distance from any land							
v(ld)n Afd) flying under							

<sup>\*</sup> Unless the appropriate air traffic control unit otherwise permits in relation to the particular flight and provided that the aircraft complies with any instructions which the air traffic control unit may give in the particular case.

Aircraf and Circum of Flight	t Scale o	f Equipme	ent Require	d					_
	A	В	C	D	E	F	G	Н	
(	Instrume Flight Rules within controlle airspace and not required to comply with 3)paragraph (a) above	nt d	-				-		

<sup>\*</sup> Unless the appropriate air traffic control unit otherwise permits in relation to the particular flight and provided that the aircraft complies with any instructions which the air traffic control unit may give in the particular case.

# **3.** The scales of radio and radio navigation equipment indicated in the foregoing Table shall be as follows:

#### Scale A

Radio equipment capable of maintaining direct two-way communication with the appropriate aeronautical radio stations.

#### Scale B

Radio navigation equipment capable of enabling the aircraft to be navigated on the intended route including such equipment as may be prescribed.

## Scale C

Radio equipment capable of receiving from the appropriate aeronautical radio stations meteorological broadcasts relevant to the intended flight.

#### Scale D

Radio navigation equipment capable of receiving signals from one or more aeronautical radio stations on the surface to enable the aircraft to be guided to a point from which a visual landing can be made at the aerodrome at which the aircraft is to land.

#### Scale E

Secondary surveillance radar equipment.

#### Scale F

Radio and radio navigation equipment capable of enabling the aircraft to be navigated along the intended route including:

- (i) automatic direction finding equipment;
- (ii) distance measuring equipment; and
- (iii) VHF omni-range equipment.

#### Scale G

Radio navigation equipment capable of enabling the aircraft to make an approach to landing using the Instrument Landing System.

#### Scale H

Radio navigation equipment capable of enabling the aircraft to be navigated on the intended route including:

- (a) automatic direction finding equipment;
- (b) distance measuring equipment;
- (c) duplicated VHF omni-range equipment; and
- (d) a 75 MHz marker beacon receiver.

Except that an aircraft may fly notwithstanding that it does not carry the equipment specified in this Scale if it carries alternate radio navigation equipment or navigational equipment approved by the Governor in writing in accordance with the provisions of Article 13(7) of this Order.

Where not more than one item of equipment specified in this Scale is unserviceable when the aircraft is about to begin a flight, the aircraft may nevertheless take off on that flight if:

- (i) it is not reasonably practicable for the repair or replacement of that item to be carried out before the beginning of the flight;
- (ii) the aircraft has not made more than one flight since the item was last serviceable; and
- (iii) the commander of the aircraft has satisfied himself that, taking into account the latest information available as to the route and aerodrome to be used (including any planned diversion) and the weather conditions likely to be encountered, the flight can be made safely and in accordance with any relevant requirements of the appropriate air traffic control unit

#### 4. In this Schedule—

- (1) "automatic direction finding equipment" means radio navigation equipment which automatically indicates the bearing of any radio station transmitting the signals received by such equipment;
- (2) "VHF omni-range equipment" means radio navigation equipment capable of giving visual indications of bearings of the aircraft by means of signals received from very high frequency omnidirectional radio ranges;
- (3) "distance measuring equipment" means radio navigation equipment capable of providing a continuous indication of the aircraft's distance from the appropriate aeronautical radio stations; and
- (4) "secondary surveillance radar equipment" means such type of radio navigation equipment as may be notified as being capable of (a) replying to an interrogation from secondary surveillance radar units on the surface and (b) being operated in accordance with such instructions as may be given to the aircraft by the appropriate air traffic control unit.

# SCHEDULE 7

Article 15

#### AIRCRAFT, ENGINE AND PROPELLER LOG BOOKS

# Aircraft Log Book

1. The following entries shall be included in the aircraft log book:

- (a) the name of the constructor, the type of the aircraft, the number assigned to it by the constructor and the date of the construction of the aircraft;
  - (b) the nationality and registration marks of the aircraft;
  - (c) the name and address of the operator of the aircraft;
- (d) the date of each flight and the duration of the period between take-off and landing, or, if more than one flight was made on that day, the number of flights and the total duration of the periods between take-offs and landings on that day;
  - (e) particulars of all maintenance work carried out on the aircraft or its equipment;
- (f) particulars of any defects occurring in the aircraft or in any equipment required to be carried therein by or under this Order, and of the action taken to rectify such defects including a reference to the relevant entries in the technical log required by Article 10(2) and (3) of this Order;
- (g) particulars of any overhauls, repairs, replacements and modifications relating to the aircraft or any such equipment as aforesaid:

Provided that entries shall not be required to be made under sub-paragraphs (e), (f) and (g) in respect of any engine or variable pitch propeller.

#### Engine Log Book

- **2.** The following entries shall be included in the engine log book:
- (a) the name of the constructor, the type of the engine, the number assigned to it by the constructor and the date of the construction of the engine;
  - (b) the nationality and registration marks of each aircraft in which the engine is fitted;
  - (c) the name and address of the operator of each such aircraft;
  - (d) either:
    - (i) the date of each flight and the duration of the period between take-off and landing or, if more than one flight was made on that day, the number of flights and the total duration of the periods between take-offs and landings on that day; or
    - (ii) the aggregate duration of periods between take-off and landing for all flights made by that aircraft since the immediately preceding occasion that any maintenance, overhaul, repair, replacement, modification or inspection was undertaken on the engine;
  - (e) particulars of all maintenance work done on the engine;
- (f) particulars of any defects occurring in the engine, and of the rectification of such defects, including a reference to the relevant entries in the technical log required by Article 10(2) and (3) of this Order;
- (g) particulars of all overhauls, repairs, replacements and modifications relating to the engine or any of its accessories.

## Variable Pitch Propeller Log Book

- 3. The following entries shall be included in the variable pitch propeller log book:
- (a) the name of the constructor, the type of the propeller, the number assigned to it by the constructor and the date of the construction of the propeller;
- (b) the nationality and registration marks of each aircraft, and the type and number of each engine, to which the propeller is fitted;
  - (c) the name and address of the operator of each such aircraft;
  - (d) either:

- (i) the date of each flight and the duration of the period between take off and landing or, if more than one flight was made on that day, the number of flights and the total duration of the periods between take-offs and landings on that day; or
- (ii) the aggregate duration of periods between take-off and landing for all flights made by that aircraft since the immediately preceding occasion that any maintenance, overhaul, repair, replacement, modification or inspection was undertaken on the propeller;
- (e) particulars of all maintenance work done on the propeller;
- (f) particulars of any defects occurring in the propeller, and of the rectification of such defects, including a reference to the relevant entries in the technical log required by Article 10(2) and (3) of this Order;
  - (g) particulars of any overhauls, repairs, replacements and modifications relating to the propeller.

#### **SCHEDULE 8**

Article 18(4)

# AREAS SPECIFIED IN CONNECTION WITH THE CARRIAGE OF FLIGHT NAVIGATORS AS MEMBERS OF THE FLIGHT CREWS OR APPROVED NAVIGATIONAL EQUIPMENT ON PUBLIC TRANSPORT AIRCRAFT

The following areas are hereby specified for the purposes of Article 18(4) of this Order:

Area A—Arctic

All that area north of latitude 68° north, but excluding any part thereof within the area enclosed by rhumb lines joining successively the following points:

68° north latitude 00° east/west longitude

73° north latitude 15° east longitude

73° north latitude 30° east longitude

68° north latitude 45° east longitude

68° north latitude 00° east/west longitude

Area B—Antarctic

All that area south of latitude 55° south.

Area C—Sahara

All that area enclosed by rhumb lines joining successively the following points:

30° north latitude 05° west longitude

24° north latitude 11° west longitude

14° north latitude 11° west longitude

14° north latitude 28° east longitude

24° north latitude 28° east longitude

28° north latitude 23° east longitude

30° north latitude 15° east longitude

30° north latitude 05° west longitude

Area D—(deleted)

Area E—South America

All that area enclosed by rhumb lines joining successively the following points:

04° north latitude 72° west longitude

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04° north latitude 60° west longitude
     08° south latitude 42° west longitude
     18° south latitude 54° west longitude
     18° south latitude 60° west longitude
     14° south latitude 72° west longitude
     05° south latitude 76° west longitude
     04° north latitude 72° west longitude
Area F—Pacific Ocean
All that area enclosed by rhumb lines joining successively the following points:
     60° north latitude 180° east/west longitude
     20° north latitude 128° east longitude
     04° north latitude 128° east longitude
     04° north latitude 180° east/west longitude
     55° south latitude 180° east/west longitude
     55° south latitude 82° west longitude
     25° south latitude 82° west longitude
     60° north latitude 155° west longitude
     60° north latitude 180° east/west longitude
Area G—Australia
All that area enclosed by rhumb lines joining successively the following points:
      18° south latitude 123° east longitude
     30° south latitude 118° east longitude
     30° south latitude 135° east longitude
     18° south latitude 123° east longitude
Area H—Indian Ocean
All that area enclosed by rhumb lines joining successively the following points:
     35° south latitude 110° east longitude
     55° south latitude 180° east/west longitude
     55° south latitude 10° east longitude
     40° south latitude 10° east longitude
     25° south latitude 60° east longitude
     20° south latitude 60° east longitude
     05° south latitude 43° east longitude
     10° north latitude 55° east longitude
     10° north latitude 73° east longitude
     04° north latitude 77° east longitude
     04° north latitude 92° east longitude
     10° south latitude 100° east longitude
```

```
10° south latitude 110° east longitude
```

35° south latitude 110° east longitude

#### Area I—North Atlantic Ocean

All that area enclosed by rhumb lines joining successively the following points:

- 55° north latitude 15° west longitude
- 68° north latitude 28° west longitude
- 68° north latitude 60° west longitude
- 45° north latitude 45° west longitude
- 40° north latitude 60° west longitude
- 40° north latitude 19° west longitude
- 55° north latitude 15° west longitude

#### Area J—South Atlantic Ocean

All that area enclosed by rhumb lines joining successively the following points:

- 40° north latitude 60° west longitude
- 18° north latitude 60° west longitude
- 05° south latitude 30° west longitude
- 55° south latitude 55° west longitude
- 55° south latitude 10° east longitude
- $40^{\circ}$  south latitude  $10^{\circ}$  east longitude
- $02^{\circ}$  north latitude  $05^{\circ}$  east longitude
- $02^{\circ}$  north latitude  $10^{\circ}$  west longitude
- 15° north latitude 25° west longitude 40° north latitude 19° west longitude
- 40° north latitude 60° west longitude

# Area K-Northern Canada

All that area enclosed by rhumb lines joining successively the following points:

- 68° north latitude 130° west longitude
- 55° north latitude 115° west longitude
- 55° north latitude 70° west longitude
- 68° north latitude 60° west longitude
- 68° north latitude 130° west longitude

# Area L—Northern Asia

All that area enclosed by rhumb lines joining successively the following points:

- 68° north latitude 56° east longitude
- 68° north latitude 160° east longitude
- 50° north latitude 125° east longitude
- 50° north latitude 56° east longitude
- 68° north latitude 56° east longitude

#### Area M—Southern Asia

All that area enclosed by rhumb lines joining successively the following points:

50° north latitude 56° east longitude

50° north latitude 125° east longitude

40° north latitude 110° east longitude

30° north latitude 110° east longitude

30° north latitude 80° east longitude

35° north latitude 80° east longitude

 $35^{\circ}$  north latitude  $56^{\circ}$  east longitude

50° north latitude 56° east longitude

#### SCHEDULE 9 Article 20

# FLIGHT CREW OF AIRCRAFT, LICENCES AND RATINGS

# PART A

#### —LICENCES

Minimum Age, Period of Validity, Privileges

#### 1. Aeroplane Pilots

# **Private Pilot's Licence (Aeroplanes)**

Minimum age—17 years

No Maximum Period of Validity

*Privileges*: The holder of the licence shall be entitled to fly as pilot in command or co-pilot of an aeroplane of any of the types specified or otherwise falling within the aircraft rating included in the licence:

- (a) he shall not fly such an aeroplane for the purpose of public transport or aerial work save as hereinafter provided—
  - (i) he may fly such an aeroplane for the purpose of aerial work which consists of:
    - (aa) the giving of instruction in flying, if his licence includes a flying instructor's rating or an assistant flying instructor's rating; or
    - (bb) the conducting of flying tests for the purposes of this Order,
    - in either case in an aeroplane owned, or operated under arrangements entered into, by a flying club of which the person giving the instruction or conducting the test and the person receiving the instruction or undergoing the test are both members;
  - (ii) he may fly such an aeroplane for the purpose of aerial work which consists of:
    - (aa) towing a glider in flights; or
    - (bb) a flight for the purpose of dropping of persons by parachute,

in either case in an aeroplane owned, or operated under arrangements entered into by a club of which the holder of the licence and any person carried in the aircraft or in any glider towed by the aircraft are members;

- (b) he shall not receive any remuneration for his services as a pilot, other than remuneration for the giving of such instruction or the conducting of such flying tests as are specified in sub-paragraph (a) (i) of this proviso;
- (c) he shall not, unless his licence includes an instrument rating (aeroplanes), fly as pilot in command of such an aeroplane—
  - (i) on a flight outside controlled airspace—
    - (aa) when the flight visibility is less than 11/2 nautical miles; or
    - (bb) when any passenger is carried and the aeroplane is flying either above 3000 feet above mean sea level in Instrument Meteorological Conditions or at or below 3000 feet above mean sea level in a flight visibility of less than 3 nautical miles;
  - (ii) on a special VFR flight in a control zone in a flight visibility of less than 5 nautical miles except on a route or in an aerodrome traffic zone notified for the purposes of this sub-paragraph;
  - (iii) out of sight of the surface; and
- (d) he shall not fly as pilot in command of such an aeroplane at night unless—
  - (i) his licence includes a night rating (aeroplanes), and
  - (ii) his licence includes an instrument rating (aeroplanes) or he has within the immediately preceding 13 months carried out as pilot in command not less than 5 take-offs and 5 landings at a time when the depression of the centre of the sun was not less than 12° below the horizon.

# **Commercial Pilot's Licence (Aeroplanes)**

Minimum Age—18 years

Maximum Period of Validity—10 years

# Privileges:

- (1) The holder of the licence shall be entitled to exercise the privileges of a Private Pilot's Licence (Aeroplanes) which includes a night rating (aeroplanes) and shall be entitled to fly as pilot in command of an aeroplane—
  - (a) on a special VFR flight notwithstanding that the flight visibility is less than 1½ nautical miles:
  - (b) when the aeroplane is taking off or landing at any place notwithstanding that the flight visibility below cloud is less than 1 nautical mile.
- (2) He shall be entitled to fly as pilot in command of an aeroplane of a type specified in Part 1 of the aircraft rating included in the licence when the aeroplane is engaged on a flight for any purpose whatsoever:

- (a) he shall not, unless his licence includes an instrument rating (aeroplanes), fly such an aeroplane on any scheduled journey;
- (b) he shall not fly such an aeroplane at night unless his licence includes an instrument rating (aeroplanes) or he has within the immediately preceding 13 months carried out as pilot in command not less than five take-offs and five landings at a time when the depression of the centre of the sun was not less than 12° below the horizon;

- (c) he shall not, unless his licence includes an instrument rating (aeroplanes), fly any such aeroplane of which the maximum total weight authorised exceeds 2,300 kg on any flight for the purpose of public transport, except a flight beginning and ending at the same aerodrome and not extending beyond 25 nautical miles from that aerodrome;
- (d) he shall not fly such an aeroplane on a flight for the purpose of public transport unless it is certified for single pilot operation;
- (e) he shall not fly such an aeroplane on any flight for the purpose of public transport after he attains the age of 60 years unless the aeroplane is fitted with dual controls and carries a second pilot who has not attained the age of 60 years and who holds an appropriate licence under this Order entitling him to act as pilot in command or co-pilot of that aeroplane.
- (3) He shall be entitled to fly as co-pilot of any aeroplane of a type specified in the aircraft rating included in the licence when the aeroplane is engaged on a flight for any purpose whatsoever:

Provided that he shall not act as co-pilot of any aeroplane whose maximum total weight authorised exceeds 20,000 kg on any flight for the purpose of public transport after he attains the age of 60 years.

(4) He shall not at any time after he attains the age of 65 years act as pilot in command or copilot of any aeroplane on a flight for the purpose of public transport.

# Airline Transport Pilot's Licence (Aeroplanes)

Minimum Age—21 years

Maximum Period of Validity—10 years

*Privileges:* The holder of the licence shall be entitled to exercise the privileges of a Commercial Pilot's Licence (Aeroplanes) except the proviso (d) to paragraph (2) of those privileges shall not apply and the holder of the licence shall not at any time after he attains the age of 60 years act as pilot in command or co-pilot of any aeroplane for the purpose of public transport if its maximum total weight authorised exceeds 20,000 kg.

# 2. Helicopter and Gyroplane Pilots

#### Private Pilot's Licence (Helicopters and Gyroplanes)

Minimum Age—17 years

No Maximum Period of Validity

*Privileges:* The holder of the licence shall be entitled to fly as pilot in command or co-pilot of a helicopter of gyroplane of any of the types specified in the aircraft rating included in the licence:

- (a) he shall not fly such a helicopter or gyroplane for the purpose of public transport or aerial work other than aerial work which consists of—
  - (i) the giving of instruction in flying if his licence includes a flying instructor's rating or an assistant flying instructor's rating;
  - (ii) the conducting of flying tests for the purposes of this Order; in either case in a helicopter or gyroplane owned, or operated under arrangements entered into, by a flying club of which the person giving the instruction or conducting the test and the person receiving the instruction or undergoing the test are both members;
- (b) he shall not receive any remuneration for his services as a pilot on a flight other than remuneration for the giving of such instruction or the conducting of such flying tests as are specified in paragraph (a) of this proviso;

- (c) he shall not fly as pilot in command of such a gyroplane at night unless his licence includes a night rating (helicopters and gyroplanes) and he has within the immediately preceding 13 months carried out as pilot in command not less than 5 take-offs and 5 landings at a time when the depression of the centre of the sun was not less than 12° below the horizon:
- (d) he shall not fly as pilot in command of such a helicopter at night unless—
  - (i) his licence includes a night rating (helicopters and gyroplanes); and
  - (ii) his licence includes an instrument rating (helicopters) or he has within the immediately preceding 13 months carried out as pilot in command not less than 5 flights, each consisting of a take-off, a transition from hover to forward flight, a climb to at least 500 feet and a landing, at a time when the depression of the centre of the sun was not less than 12° below the horizon;
- (e) he shall not unless his licence includes an instrument rating (helicopters) fly as pilot in command or co-pilot of such a helicopter flying in airspace notified for the purposes of this Schedule:
  - (i) in conditions such that he cannot comply with the specified minimum weather provisions; or
  - (ii) in circumstances which require compliance with Instrument Flight Rules.

# Commercial Pilot's Licence (Helicopters and Gyroplanes)

Minimum Age—18 years

Maximum Period of Validity—10 years

#### Privileges:

- (1) The holder of the licence shall be entitled to exercise the privileges of a Private Pilot's Licence (Helicopters and Gyroplanes) which includes a night rating (helicopters and gyroplanes).
- (2) He shall be entitled to fly as pilot in command of any helicopter or gyroplane specified in Part 1 of the aircraft rating included in the licence when the helicopter or gyroplane is engaged on a flight for any purpose whatsoever:

- (a) he shall not, unless his licence includes an instrument rating (helicopters), fly such a helicopter on any scheduled journey or on any flight for the purpose of public transport in Instrument Meteorological Conditions;
- (b) he shall not fly such a helicopter or gyroplane on a flight for the purpose of public transport unless it is certificated for single pilot operation;
- (c) he shall not fly such a gyroplane at night unless he has within the immediately preceding 13 months carried out as a pilot in command not less than 5 take-offs and 5 landings at a time when the depression of the centre of the sun was not less than 12° below the horizon;
- (d) he shall not fly such a helicopter at night unless his licence includes an instrument rating (helicopters) or he has within the immediately preceding 13 months carried out as pilot in command not less than 5 flights, each consisting of a take-off, a transition from hover to forward flight, a climb to at least 500 feet and a landing, at a time when the depression of the centre of the sun was not less than 12° below the horizon;
- (e) he shall not fly such a helicopter or gyroplane on any flight for the purpose of public transport after he attains the age of 60 years unless the helicopter or gyroplane is fitted with dual controls and carries a second pilot who has not attained the age of 60 years and who holds an appropriate licence under this Order entitling him to act as pilot in command or co-pilot of that helicopter or gyroplane;

- (f) he shall not unless his licence includes an instrument rating (helicopters) fly as pilot in command or co-pilot of such a helicopter flying in airspace notifed for the purposes of this Schedule:
  - (i) in conditions such that he cannot comply with the specified minimum weather provisions; or
  - (ii) in circumstances which require compliance with the Instrument Flight Rules.
- (3) He shall be entitled to fly as co-pilot of any helicopter or gyroplane specified in the aircraft rating included in the licence when the helicopter or gyroplane is engaged on a flight for any purpose whatsoever:

Provided that he shall not act as co-pilot of any helicopter or gyroplane whose maximum total weight authorised exceeds 20,000 kg on any flight for the purpose of public transport after he attains the age of 60 years.

(4) He shall not at any time after he attains the age of 65 years act as pilot in command or copilot of any helicopter or gyroplane on a flight for the purpose of public transport.

# Airline Transport Pilot's Licence (Helicopters and Gyroplanes)

Minimum Age—21 years

Maximum Period of Validity—10 years

*Privileges:* The holder of the licence shall be entitled to exercise the privileges of a Commercial Pilot's Licence (Helicopters and Gyroplanes) except that proviso (b) to paragraph (2) of those privileges shall not apply and the holder of the licence shall not at any time after he attains the age of 60 years act as pilot in command or co-pilot of any helicopter or gyroplane for the purpose of public transport if its maximum total weight authorised exceeds 20,000 kg.

# 3. Balloon and Airship Pilots

#### Private Pilot's Licence (Balloons and Airships)

Minimum Age—17 years

No Maximum Period of Validity

*Privileges*: The holder of the licence shall be entitled to fly as pilot in command of any type of balloon or airship specified in Part 1 of the aircraft rating included in the licence and co-pilot of any type of balloon or airship specified in such aircraft rating:

Provided that—

- (a) he shall not fly such balloon or airship for the purpose of public transport or aerial work, other than aerial work which consists of the giving of instruction in flying or the conducting of flying tests in either case in a balloon or airship owned, or operated under arrangements entered into, by a flying club of which the person giving the instruction or conducting the test and the person receiving the instruction or undergoing the test are both members;
- (b) he shall not receive any remuneration for his services as pilot on a flight other than remuneration for the giving of such instruction or the conducting of such flying tests as are specified in paragraph (a) of this proviso.
- (c) he shall not fly such a balloon unless he has within the immediately preceding 13 months carried out as pilot in command in a free balloon 5 flights each of not less than 5 minutes duration.

#### **Commercial Pilot's Licence (Balloons)**

Minimum Age—18 years

Maximum Period of Validity—6 months(3)\*

# Privileges:

- (1) The holder of the licence shall be entitled to exercise the privileges of a Private Pilot's Licence (Balloons and Airships).
- (2) He shall be entitled to fly, when the balloon is flying for any purpose whatsoever, as pilot in command or co-pilot of any type of balloon specified in the aircraft rating included in the licence:

Provided that he shall not act as pilot in command on a flight for the purpose of the public transport of passengers unless he has within the immediately preceding 90 days carried out as pilot in command in a free balloon 3 flights each of not less than 5 minutes duration.

# **Commercial Pilot's Licence (Airships)**

Minimum Age—17 years Maximum Period of Validity—10 years

#### Privileges:

- (1) The holder of the licence shall be entitled to exercise the privileges of a Private Pilot's Licence (Balloons and Airships).
- (2) He shall be entitled to fly, when the airship is flying for any purpose whatsoever, as pilot in command of any type of airship specified in Part 1 of the aircraft rating included in the licence and as co-pilot of any type of airship specified in such aircraft rating.

#### 4. Glider Pilots

# **Private Pilot's Licence (Gliders)**

Minimum Age—17 years

No Maximum Period of Validity(3)

*Privileges*: The holder of the licence shall be entitled to fly as pilot in command or co-pilot of a glider of any of the types specified in the aircraft rating included in the licence:

#### Provided that:

- (a) he shall not fly such a glider for the purpose of public transport or aerial work other than aerial work which consists of:
  - (i) the giving of instruction in gliding if his licence includes a flying instructor's rating or an assistant instructor's rating; or
  - (ii) the conducting of flying tests for the purposes of this Order;
    - in either case in a glider owned, or operated under arrangements entered into, by a flying club of which the person giving the instruction or conducting the test and the person receiving the instruction or undergoing the test are both members.
- (b) he shall not receive any remuneration for his services as a pilot on a flight other than remuneration for the giving of such instruction or the conducting of such flying tests as are specified in paragraph (a) of this proviso.

# **Commercial Pilot's Licence (Gliders)**

Minimum Age—18 years

Maximum Period of Validity—10 years

<sup>(3)</sup> In respect of the privileges of a Private Pilot's Licence the maximum period of validity shall be as given for that licence.

<sup>(3)</sup> In respect of the privileges of a Private Pilot's Licence the maximum period of validity shall be as given for that licence.

*Privileges*: The holder of the licence shall be entitled to fly for any purpose as pilot in command or co-pilot of—

- (a) any glider of which the maximum total weight authorised does not exceed 680 kg;
- (b) any glider of which the maximum total weight authorised exceeds 680 kg and which is of a type specified in the rating included in the licence.

#### 5. Other Flight Crew

# Flight Navigator's Licence

Minimum Age—21 years

Maximum Period of Validity—10 years

*Privileges:* The holder of the licence shall be entitled to act as flight navigator in any aircraft.

# Flight Engineer's Licence

Minimum Age—21 years

Maximum Period of Validity—10 years

*Privileges:* The holder of the licence shall be entitled to act as flight engineer in any type of aircraft specified in the aircraft rating included in the licence.

# Flight Radiotelephony Operator's General Licence

Minimum Age—18 years

Maximum Period of Validity—10 years

*Privileges*: The holder of the licence shall be entitled to operate radiotelephony apparatus in any aircraft.

# Flight Radiotelephony Operator's Restricted Licence

Minimum Age—17 years

Maximum Period of Validity—10 years

*Privileges:* The holder of the licence shall be entitled to operate radiotelephony apparatus in any aircraft if the stability of the frequency radiated by the transmitter is maintained automatically but shall not be entitled to operate the transmitter, or to adjust its frequency, except by the use of external switching devices.

# Flight Radiotelegraphy Operator's Licence

Minimum Age—20 years

Maximum Period of Validity—12 months

*Privileges:* The holder of the licence shall be entitled to operate radiotelegraphy and radiotelephony apparatus in any aircraft.

#### Flight Radiotelegraphy Operator's Temporary Licence

Minimum Age—18 years

Maximum Period of Validity—12 months

*Privileges*: The holder of the licence shall be entitled to operate radiotelegraphy and radiotelephony apparatus in any aircraft under the supervision of a person who is the holder of a flight radiotelegraphy operator's licence.

# PART B

# -RATINGS

1. The following ratings may be included in a pilot's licence granted under Part IV of this Order, and subject to the provisions of this Order and of the licence, the inclusion of a rating in a licence shall have the consequences respectively specified as follows—

Aircraft Ratings: The licence shall entitle the holder to act as pilot of aircraft of the types specified in the aircraft rating and different types of aircraft may be specified in respect of different privileges of a licence.

*Instrument Rating (Aeroplanes)* shall entitle the holder of the licence to act as pilot in command or co-pilot of an aeroplane flying in airspace notified for the purpose of this Schedule either in conditions such that he cannot comply with the specified minimum weather provisions or in circumstances which require compliance with the Instrument Flight Rules.

*Instrument Rating (Helicopters)* shall entitle the holder of the licence to act as pilot in command or co-pilot of a helicopter flying in airspace notified for the purpose of this Schedule either in conditions such that he cannot comply with the specified minimum weather provisions or in circumstances which require compliance with the Instrument Flight Rules.

*Night Rating (Aeroplanes)* shall entitle the holder of a private pilot's licence (aeroplanes) to act as pilot in command of an aeroplane at night.

*Night Rating (Helicopters and Gyroplanes)* shall entitle the holder of a private pilot's licence (helicopters and gyroplanes) to act as pilot in command of a helicopter or gyroplane at night.

*Towing Rating (Flying Machines)* shall entitle the holder of the licence to act as pilot of a flying machine while towing a glider in flight for the purposes of public transport or aerial work.

Flying Instructor's Rating shall entitle the holder of the licence to give instruction in flying aircraft of such types as may be specified in the rating for that purpose.

Assistant Flying Instructor's Rating shall entitle the holder of the licence to give instruction in flying aircraft of such types as may be specified in the rating for that purpose:—

## Provided that—

- (a) such instruction shall only be given under the supervision of a person present during the take-off and landing at the aerodrome at which the instruction is to begin and end and holding a pilot's licence endorsed with a flying instructor's rating; and
- (b) an assistant flying instructor's rating shall not entitle the holder of the licence to give directions to the person undergoing instruction in respect of the performance by that person of—
  - (i) his first solo flight;
  - (ii) his first solo flight by night;
  - (iii) his first solo cross-country flight otherwise than by night; or
  - (iv) his first solo cross-country flight by night.
- **2.** An aircraft rating included in a flight engineer's licence shall entitle the holder of the licence to act as flight engineer only of aircraft of a type specified in the aircraft rating.
  - 3. For the purposes of this Schedule—

"Solo flight" means a flight on which the pilot of the aircraft is not accompanied by a person holding a pilot's licence granted or rendered valid under this Order.

"Cross-country flight" means any flight during the course of which the aircraft is more than 3 nautical miles from the aerodrome of departure.

# PART C

# —CERTIFICATE OF TEST OR EXPERIENCE

(a) (a) A certificate of test or certificate of experience required by Article 20(4) of this Order shall not be appropriate to the functions to be performed on a flight unless it is a certificate appropriate to the description of the flight according to the following Table:

Case	Class of Licence	Description of Flight	Certificate Required
A.	Private Pilot's Licence (Aeroplanes) Private Pilot's Licence (Helicopters and Gyroplanes)	Any flight within the privileges of the licence	Certificate of test or certificate of experience
B.	Commercial Pilot's Licence (Aeroplanes) Commercial Pilot's Licence (Helicopters and Gyroplanes) Commercial Pilot's Licence (Gliders) Commercial Pilot's Licence (Airships) Airline Transport Pilot's Licence (Aeroplanes) Airline Transport Pilot's Licence (Helicopters and Gyroplanes)	Carriage of passengers on a flight in respect of which the holder of the licence receives remuneration	Certificate of test
C.	Commercial Pilot's Licence (Aeroplanes) Commercial Pilot's Licence (Helicopters and Gyroplanes)	For public transport	Certificate of test

Case	Class of Licence	Description of Flight	Certificate Required
	Commercial Pilot's Licence (Gliders) Commercial Pilot's Licence (Airships) Airline Transport Pilot's Licence (Aeroplanes) Airline Transport Pilot's Licence (Helicopters and Gyroplanes)		
D.	Commercial Pilot's Licence (Aeroplanes) Commercial Pilot's Licence (Helicopters and Gyroplanes) Commercial Pilot's Licence (Gliders) Commercial Pilot's Licence (Airships) Airline Transport Pilot's Licence (Aeroplanes) Airline Transport Pilot's Licence (Helicopters and Gyroplanes)	For aerial work	Certificate of test or certificate of experience
E.	Commercial Pilot's Licence (Aeroplanes) Commercial Pilot's Licence (Helicopters and Gyroplanes)	Any flight within the privileges of a Private Pilot's Licence	Certificate of test or certificate of experience

Case	Class of Licence	Description of Flight	Certificate Required
	Commercial Pilot's Licence (Gliders) Commercial Pilot's Licence (Airships) Airline Transport Pilot's Licence (Aeroplanes) Airline Transport Pilot's Licence (Helicopters and Gyroplanes)		
F.	Flight Navigator's Licence	Flights to which Article 18(4) of this Order applies	Certificate of experience
G.	Flight Engineer's Licence	For public transport	Certificate of test
Н.	Flight Engineer's Licence	Any flight other than for public transport	Certificate of test or certificate of experience

(b) For the purposes of this Part of this Schedule references to Cases are references to the cases indicated in the first Column of the Table in paragraph 1(a) of this Part of this Schedule.

#### Certificate of test

- **2.** A certificate of test required by Article 20(4) or 20(5) of this Order shall be signed by a person authorised by the Governor to sign certificates of this kind and shall certify the following particulars:
  - (a) the functions to which the certificate relates;
  - (b) that the person signing the certificate is satisfied that on a date specified in the certificate the holder of the licence or personal flying logbook of which the certificate forms part, as the case may be, passed an appropriate test of his ability to perform the functions to which the certificate relates:
  - (c) the type of aircraft or flight simulator in or by means of which the test was conducted; and
  - (d) the date on which it was signed.

# Nature of test

- 3. The appropriate test referred to in paragraph 2 of this Part of this Schedule shall be:
  - (a) in the case of a test which entitles the holder of the licence of which the certificate forms part to act as pilot in command and/or co-pilot of aircraft of the type specified in the certificate, a test of the pilot's competence to fly the aircraft as pilot in command and/or co-pilot and shall where the Governor so specifies in respect of the whole or part of

- a test be conducted in an aircraft in flight or by means of a flight simulator approved by the Governor;
- (b) in the case of a test which entitles the holder of the licence of which the certificate forms part to act as flight engineer of aircraft of the type specified in the certificate, a test of the flight engineer's competence to perform the duties of a flight engineer in the type of aircraft to be used on the flight and shall, where the Governor so specifies in respect of the whole or part of a test, be conducted in an aircraft in flight or by means of a flight simulator approved by the Governor;
- (c) in the case of a test which entitles the holder of the licence of which the certificate forms part to perform the functions to which an Instrument Rating relates a test of his ability to perform the functions to which the rating relates and shall, where the Governor so specifies in respect of the whole or part of the test, be conducted in an aircraft in flight or by means of a flight simulator approved by the Governor;
- (d) in the case of a test which entitles the holder of the licence of which the certificate forms part to perform the functions to which a flying instructor's rating or an assistant flying instructor's rating relates, a test of his ability to perform the functions to which the rating relates and shall where the Governor so specifies in respect of the whole or part of the test be conducted in an aircraft in flight.

# Period of Validity of Certificate of Test

- (a) A certificate of test required by Article 20(4) of this Order in respect of a Commercial Pilot's Licence (Balloons) shall not be valid in relation to a flight made more than 13 months after the date of the test which it certifies and in respect of any other licence shall not be valid in relation to a flight made more than 13 months in Cases A, B, E and H, or more than 6 months in Cases C, D and G, after the date of the test which it certifies:
  - Provided that in the case of Cases C, D and G two certificates of test shall together be deemed to constitute a valid certificate of test if they certify flying tests conducted on two occasions within the period of 13 months preceding the flight on which the functions are to be performed, such occasions being separated by an interval of not less than 4 months, and if both certificates are appropriate to those functions.
- (b) A certificate of test required by Article 20(5) of this Order shall not be valid in relation to a flight made more than 13 months in the case of an instrument rating (aeroplanes) and an assistant flying instructor's rating or more than 25 months in the case of a flying instructor's rating, after the date of the test which it certifies.

#### Certificate of experience

- **5.** A certificate of experience required by Article 20(4) of this Order shall be signed by a person authorised by the Governor to sign such a certificate and shall certify the following particulars:
  - (a) the functions to which the certificate relates;
  - (b) in the case of a pilot or flight engineer, that on the date on which the certificate was signed the holder of the licence or personal flying logbook of which it forms part, as the case may be, produced his personal flying logbook to the person signing the certificate and satisfied him that he had appropriate experience in the capacity to which his licence relates within the appropriate period specified in paragraph 6 of this Part of this Schedule;
  - (c) in the case of a flight navigator, that on the date on which the certificate was signed the holder of the licence of which it forms part produced his navigation logs, charts and workings of astronomical observations to the person signing the certificate and satisfied

- him that he had appropriate experience in the capacity to which the licence relates within the appropriate period specified in paragraph 6 of this Part of this Schedule;
- (d) in the case of a pilot or flight engineer, the type or types of aircraft in which the experience was gained;
- (e) the date on which it was signed.

#### Period of experience

**6.** A certificate of experience shall not be valid unless the experience certified was gained within the period of 13 months preceding the signing of the certificate in the case of Cases A, E, F and H, or 6 months preceding the signing of the certificate in the case of Case D.

# Period of Validity of Certificate of Experience

7. A certificate of experience in respect of a Commercial Pilot's Licence (Balloons) shall not be valid more than 13 months after it was signed and in respect of any other licence shall not be valid more than 6 months after it was signed for Case D, nor more than 13 months after it was signed for any other Case.

#### SCHEDULE 10

Article 66(2)

#### AIR TRAFFIC CONTROLLERS: RATINGS

1. The holder of a licence which includes ratings of two or more of the classes specified in paragraph 2 of this Schedule shall not at any one time perform the functions specified in respect of more than one of those ratings:

Provided that the functions of any one of the following groups of ratings may be exercised at the same time—

- (a) The aerodrome control rating and the approach control rating;
- (b) The approach control rating and the approach radar control rating; except that the functions of the approach control rating shall not be exercised at the same time as the functions of the approach radar control rating if the service being provided under the latter is a surveillance radar approach terminating at a point less than 2 nautical miles from the point of intersection of the glide path with the runway;
- (c) The area control rating and the area radar control rating.
- **2.** Ratings of the following classes may be included in an air traffic controller's licence (other than a student air traffic controller's licence) granted under Article 65 of this Order and, subject to the provisions of this Order and of the licence, the inclusion of a rating in a licence shall have the consequences respectively specified as follows—
- (1) Aerodrome Control Rating shall entitle the holder of the licence for which the rating is valid, to provide air traffic control service (but not with any type of radar equipment for which a radar control rating is required under this paragraph) for any aircraft on the manoeuvring area or apron of that aerodrome or which is flying in the vicinity of the aerodrome traffic zone by visual reference to the surface.
- (2) Approach Control Rating shall entitle the holder of the licence, at any aerodrome for which the rating is valid, to provide air traffic control service (but not with any type of radar equipment for which a radar control rating is required under this paragraph) for any aircraft which is flying in the vicinity of the aerodrome traffic zone whether or not it is flying by visual reference to the surface.

- (3) Approach Radar Control Rating shall entitle the holder of the licence, at any aerodrome for which the rating is valid, to provide air traffic control service with the aid of any type of surveillance radar equipment for which the rating is valid for any aircraft which is flying within 40 nautical miles of the aerodrome traffic zone whether or not it is flying by visual reference to the surface.
- (4) Precision Approach Radar Control Rating shall entitle the holder of the licence, at any aerodrome for which the rating is valid, to provide air traffic control service with the aid of any type of precision approach radar equipment for which the rating is valid.
- (5) *Area Control Rating* shall entitle the holder of the licence at any place for which the rating is valid to provide an air traffic control service without the aid of any surveillance radar equipment.
- (6) Area Radar Control Rating shall entitle the holder of the licence, at any place for which the rating is valid, to provide air traffic control service with the aid of any type of surveillance radar equipment for which the rating is valid.
- (7) Area Radar Control (Aerodrome) Rating shall entitle the holder of the licence, at any aerodrome for which the rating is valid, to provide air traffic control service with the aid of any type of surveillance radar equipment for which the rating is valid.

#### SCHEDULE 11

# PUBLIC TRANSPORT—OPERATIONAL REQUIREMENTS

Article 25

# PART A

# —OPERATIONS MANUAL

Information and instructions relating to the following matters shall be included in the operations manual referred to in Article 25(2) of this Order:

- (i) the number of the crew to be carried in the aircraft, on each stage of any route to be flown, and the respective capacities in which they are to act, and instructions as to the order and circumstances in which command is to be assumed by members of the crew;
- (ii) the respective duties of each member of the crew and the other members of the operating staff;
- (iii) the scheme referred to in Article 54(1)(c)(i) of this Order;
- (iv) such technical particulars concerning the aircraft, its engines and equipment and concerning the performance of the aircraft as may be necessary to enable the flight crew of the aircraft to perform their respective duties;
- (v) the manner in which the quantities of fuel and oil to be carried by the aircraft are to be computed and records of fuel and oil carried and consumed on each stage of the route to be flown are to be maintained; the instructions shall take account of all circumstances likely to be encountered on the flight including the possibility of failure of one or more of the aircraft engines;
- (vi) the manner in which the quantity, if any, of oxygen equipment to be carried in the aircraft for the purpose of complying with Scales L1 and L2 in Schedule 5 to this Order is to be computed;
- (vii) the check system to be followed by the crew of the aircraft prior to and on take-off, on landing and in an emergency, so as to ensure that the operating procedures contained in the operations manual and in the flight manual or performance schedule forming part of the relevant certificate of airworthiness are complied with;
- (viii) the circumstances in which a radio watch is to be maintained;

- (ix) the circumstances in which oxygen is to be used by the crew of the aircraft, and by passengers;
- (x) communication, navigational aids, aerodromes, local regulations, in-flight procedures, approach and landing procedures and such other information as the operator may deem necessary for the proper conduct of flight operations; the information referred to in this paragraph shall be contained in a route guide, which may be in the form of a separate volume;
- (xi) the reporting in flight to the notified authorities of meteorological observations;
- (xii) the minimum altitudes for safe flight on each stage of the route to be flown and any planned diversion therefrom, such minimum altitudes being not lower than any which may be applicable under the law of Hong Kong or of the countries whose territory is to be flown over;
- (xiii) the particulars referred to in Article 30 of this Order;
- (xiv) emergency flight procedures, including procedures for the instruction of passengers in the position and use of emergency equipment and procedures to be adopted when the commander of the aircraft becomes aware that another aircraft or vessel is in distress and needs assistance;
- (xv) in the case of aircraft intended to fly at an altitude of more than 49,000 feet the procedures for the use of cosmic radiation detection equipment;
- (xvi) the labelling and marking of dangerous goods, the manner in which they must be loaded on an aircraft and the responsibilites of members of the crew in respect of the carriage of dangerous goods:

Provided that in relation to any flight which is not one of a series of flights between the same two places it shall be sufficient if, to the extent that it is not practicable to comply with paragraphs (x) and (xii), the manual contains such information and instructions as will enable the equivalent data to be ascertained before take-off.

Article 27

#### PART B

#### —CREW TRAINING AND TESTS

- 1. The training, experience, practice and periodical tests required under Article 27(2) of this Order in the case of members of the crew of an aircraft engaged on a flight for the purpose of public transport shall be as follows:
  - (1) The Crew

Every member of the crew shall—

- (a) have been tested within the relevant period by or on behalf of the operator as to his knowledge of the use of the emergency and life saving equipment required to be carried in the aircraft on the flight; and
- (b) have practised within the relevant period under the supervision of the operator or of a person appointed by him for the purpose, the carrying out of the duties required of him in case of an emergency occurring to the aircraft, either in an aircraft of the type to be used on the flight or in apparatus approved by the Governor for the purpose and controlled by persons so approved.
- (2) Pilots
  - (a) Every pilot included in the flight crew who is intended by the operator to fly as pilot in circumstances requiring compliance with the Instrument Flight Rules shall within the relevant period have been tested by or on behalf of the operator—

- (i) as to his competence to perform his duties while executing normal manoeuvres and procedures in flight, in an aircraft of the type to be used on the flight including the use of the instruments and equipment provided in the aircraft;
- (ii) as to his competence to perform his duties in instrument flight conditions while executing emergency manoeuvres and procedures in flight, in an aircraft of the type to be used on the flight, including the use of the instruments and equipment provided in the aircraft.

A pilot's ability to carry out normal manoeuvres and procedures shall be tested in the aircraft in flight.

The other tests required by this sub-paragraph may be conducted either in the aircraft in flight, or under the supervision of a person approved by the Governor for the purpose by means of a flight simulator approved by the Governor under Article 20(10) of this Order. The tests specified in sub-paragraph (2)(a)(ii) of this paragraph when conducted in the aircraft in flight shall be carried out either in actual instrument flight conditions or in instrument flight conditions simulated by means approved by the Governor.

- (b) Every pilot included in the flight crew whose licence does not include an instrument rating or who, notwithstanding the inclusion of such a rating in his licence, is not intended by the operator to fly in circumstances requiring compliance with the Instrument Flight Rules, shall within the relevant period have been tested, by or on behalf of the operator, in flight in an aircraft of the type to be used on the flight—
  - (i) as to his competence to act as pilot thereof, while executing normal manoeuvres procedures, and
  - (ii) as to his competence to act as pilot thereof while executing emergency manoeuvres and procedures.
- (c) Every pilot included in the flight crew who is seated at the flying controls during take-off or landing shall within the relevant period—
  - (i) have been tested as to his proficiency using instrument approach-to-land systems of the type in use at the aerodromes of intended landing and any alternative aerodromes, such test being carried out either in flight in instrument flight conditions or in instrument flight conditions simulated by means approved by the Governor or under the supervision of a person approved by the Governor for the purpose by means of a flight simulator approved by the Governor, and
  - (ii) have carried out when seated at the flying controls not less than three take-offs and three landings in aircraft of the type to be used on the flight.

#### (3) Flight Engineers

Every flight engineer included in the flight crew shall within the relevant period have been tested by or on behalf of the operator—

- (a) as to his competence to perform his duties while executing normal procedures in flight, in an aircraft of the type to be used on the flight.
- (b) as to his competence to perform his duties while executing emergency procedures in flight, in an aircraft of the type to be used on the flight.

A flight engineer's ability to carry out normal procedures shall be tested in an aircraft in flight. The other tests required by this sub-paragraph may be conducted either in the aircraft in flight, or under supervision of a person approved by the Governor for the purpose by means of a flight simulator approved by the Governor.

(4) Flight Navigators and Flight Radio Operators

Every flight navigator and flight radio operator whose inclusion in the flight crew is required under Article 18(4) and (5) respectively of this Order shall with the relevant period have been tested by or on behalf of the operator as to his competence to perform his duties in conditions corresponding to those likely to be encountered on the flight—

- (a) in the case of a flight navigator, using equipment of the type to be used in the aircraft on the flight for purposes of navigation;
- (b) in the case of a flight radio operator, using radio equipment of the type installed in the aircraft to be used on the flight, and including a test of his ability to carry out emergency procedures.

#### (5) Aircraft Commanders

- (a) The pilot designated as commander of the aircraft for the flight shall within the relevant period have demonstrated to the satisfaction of the operator that he has adequate knowledge of the route to be taken, the aerodromes of take-off and landing, and any alternate aerodromes, including in particular his knowledge of—
  - (i) the terrain;
  - (ii) the seasonal meteorological conditions;
  - (iii) the meteorological communications, and air traffic facilities, services and procedures; and
  - (iv) the search and rescue procedures, and the navigational facilities, relevant to the route.
- (b) In determining whether a pilot's knowledge of the matters referred to in sub-paragraph (a) is sufficient to render him competent to perform the duties of aircraft commander on the flight, the operator shall take into account the pilot's flying experience in conjunction with the following—
  - (i) the experience of other members of the intended flight crew;
  - (ii) the influence of terrain and obstructions on departure and approach procedures at the aerodromes of take-off and intended landing and at alternate aerodromes;
  - (iii) the similarity of the instrument approach procedures and let-down aids to those with which the pilot is familiar;
  - (iv) the dimensions of runways which may be used in the course of the flight in relation to the performance limits of aircraft of the type to be used on the flight;
  - (v) the reliability of meteorological forecasts and the probability of difficult meteorological conditions in the areas to be traversed;
  - (vi) the adequacy of the information available regarding the aerodrome of intended landing and any alternate aerodromes;
  - (vii) the nature of air traffic control procedures and familiarity of the pilot with such procedures;
  - (viii) the influence of terrain on route conditions and the extent of the assistance obtainable en-route from navigational aids and air-to-ground communication facilities; and
  - (ix) the extent to which it is possible for the pilot to become familiar with unusual aerodrome procedures and features of the route by means of ground instruction and training devices.

#### (6) For the purposes of this paragraph—

"instrument flight conditions" means weather conditions such that the pilot is unable to fly by visual reference to objects outside the aircraft;

"relevant period" means a period which immediately precedes the commencement of the flight, being a period—

- (a) in the case of sub-paragraph (2)(c)(ii) of this paragraph, of 3 months;
- (b) in the case of sub-paragraphs (2)(a)(ii), (2)(b)(ii), (2)(c)(i) and (3)(b) of this paragraph, of 6 months;
- (c) in the case of sub-paragraphs (1), (2)(a)(i), (2)(b)(i), (3)(a), (4) and (5)(a) of this paragraph, of 13 months:

- (i) any pilot of the aircraft to whom the provisions of sub-paragraphs (2)(a)(ii), (2)(b) (ii) or (2)(c)(i) and any flight engineer of the aircraft to whom the provisions of sub-paragraph (3)(b) of this paragraph apply shall for the purposes of the flight be deemed to have complied with such requirement respectively within the relevant period if he has qualified to perform his duties in accordance therewith on two occasions within the period of 13 months immediately preceding the flight, such occasions being separated by an interval of not less than 4 months;
- (ii) the requirements of sub-paragraph (5)(a) shall be deemed to have been complied with within the relevant period by a pilot designated as commander of the aircraft for the flight if, having become qualified so to act on flights between the same places over the same route more than 13 months before commencement of the flight, he has within the period of 13 months immediately preceding the flight flown as pilot of an aircraft between those places over the route.
- **2.**—(1) The records required to be maintained by an operator under Article 27(2) of this Order shall be accurate and up-to-date records so kept as to show, on any date, in relation to each person who has during the period of two years immediately preceding that date flown as a member of the crew of any public transport aircraft operated by that operator—
  - (a) the date and particulars of each test required by this Schedule undergone by that person during the said period including the name and qualifications of the examiner;
  - (b) the date upon which the person last practised the carrying out of duties referred to in paragraph 1(1)(b) of this Schedule;
  - (c) the operator's conclusions based on each such test and practice as to that person's competence to perform his duties;
  - (d) the date and particulars of any decision taken by the operator during the said period in pursuance of paragraph 1(5)(a) of this Schedule including particulars of the evidence upon which that decision was based.
- (2) The operator shall whenever called upon to do so by any authorised person produce for the inspection of any person so authorised all records referred to in the preceding sub-paragraphs and furnish to any such person all such information as he may require in connection with any such records and produce for his inspection all log books, certificates, papers and other documents, whatsoever which he may reasonably require to see for the purpose of determining whether such records are complete or of verifying the accuracy of their contents.
- (3) The operator shall at the request of any person in respect of whom he is required to keep records as aforesaid furnish to that person, or to any operator of aircraft for the purpose of public transport by whom that person may subsequently be employed, particulars of any qualifications in accordance with this Schedule obtained by such person whilst in his service.

# PART C

# —TRAINING MANUAL

The following information and instructions in relation to the training, experience, practice and periodical tests required under Article 27(2) of this Order shall be included in the training manual referred to in Article 26(2) of this Order—

- (i) the manner in which the training, practice and periodical tests required under Article 27(2) and specified in Part B of Schedule 11 to this Order are to be carried out;
- (ii) (a) the minimum qualifications and experience which the operator requires of persons appointed by him to give or to supervise the said training, practice and periodical tests; and
  - (b) the type of training, practice and periodical tests which each such person is appointed to give or to supervise; and
  - (c) the type of aircraft in respect of which each such person is appointed to give or to supervise the said training, practice and periodical tests;
- (iii) the minimum qualifications and experience required of each member of the crew undergoing the said training, practice and periodical tests;
- (iv) the syllabus for, and specimen forms for recording, the said training, practice and periodical tests:
- (v) the manner in which instrument flight conditions and engine failure are to be simulated in the aircraft in flight;
- (vi) the extent to which the said training and testing is permitted in the course of flights for the purpose of public transport;
- (vii) the use to be made in the said training and testing of apparatus approved for the purpose by the Governor.

#### SCHEDULE 12

Articles 57 and 59

# DOCUMENTS TO BE CARRIED BY AIRCRAFT REGISTERED IN HONG KONG On a flight for the purpose of public transport:

Documents A, B, C, D, E, F, H and, if the flight is international air navigation, Document G. On a flight for the purpose of aerial work:

Documents A, B, C, E, F and, if the flight is international air navigation, Document G.

On a flight, being international air navigation for a purpose other than public transport of aerial work: Documents A, B, C and G.

For the purposes of this Schedule:

"A" means the licence in force in respect of the aircraft radio station installed in the aircraft, and the current telecommunication log book required by this Order;

"B" means the certificate of airworthiness in force in respect of the aircraft:

Provided that, with the permission in writing of the Governor, an aircraft to which Article 25 of this Order applies need not carry the flight manual as part of this document if it carries an operations manual which includes—

(i) the information shown in the Limitations and Emergency Procedures section of the flight manual, and

- (ii) performance instructions which are derived from the material contained in the performance section of the flight manual.
  - "C" means the licences of the members of the flight crew of the aircraft;
  - "D" means one copy of the load sheet, if any, required by Article 28 of this Order in respect of the flight;
  - "E" means one copy of each certificate of maintenance review, if any, in force in respect of the aircraft;
  - "F" means the technical log, if any, in which entries are required to be made under Article 10;
  - "G" means the certificate of registration in force in respect of the aircraft;
  - "H" means the operations manual, if any, required by Article 25(2)(a)(iii) of this Order to be carried out on the flight;
  - "International air navigation" means any flight which includes passage over the territory of any country other than Hong Kong.

# SCHEDULE 13 Article 91

# PART A —PROVISIONS REFERRED TO IN ARTICLE 91(5)

Subject Matter
Aircraft flying unregistered
Aircraft flying with false or incorrect markings
Flight without appropriate maintenance
Flight without a certificate of maintenance review
Failure to keep technical log
Flight without a certificate of release to service
Flight without required equipment
Flight without required radio equipment
Failure to keep log book
Requirement to weigh aircraft and keep weight schedule
Crew requirement
Requirement for appropriate licence
Requirement for appropriate certificates
Prohibition of flight after failure of test
Flight without valid medical certificate
Flight in unfit condition

Article of Order	Subject Matter	
23	Instruction in flying without appropriate licence and rating	
25	Operations manual requirement	
26	Training manual requirement	
27	Operator's responsibilities in connection with crew	
28	Requirements for loading aircraft	
29	Operational restrictions on aircraft	
30	Aerodrome operating minima—aircraft registered in Hong Kong	
31	Aerodrome operating minima—foreign registered aircraft	
31A	Non-public transport aircraft—aerodrome operating minima	
32	Pre-flight action by commander of aircraft	
33	Requirement for pilot to remain at controls	
34	Duties of commander on flight for public transport of passengers	
35	Requirements for radio station in aircraft to be licensed and for operation of same	
36	Requirement for minimum navigation performance stystem	
37	Use of flight recorders and preservation of records	
38	Towing of gliders	
39	Towing, picking-up and raising of persons and articles by aircraft	
40 and 41	Dropping of persons, animals and articles from aircraft	
42	Requirement for aerial application certificate	
45	Carriage of persons in or on any part of an aircraft not designed for that purpose	
46	Requirement for exits and break-in markings	
50	Prohibition of smoking in aircraft	
51	Requirement to obey lawful commands of aircraft commander	
52	Prohibition of stowaways	
54(3)	Operator's obligation to obtain flight time records of flight crew	

Article of Order	Subject Matter
55(2)	Flight crew member's obligation to inform operator of flight times
56	Flight time limitations
64(2)	Breach of Rules of the Air
66 (except (4))	Requirement for licensing of air traffic controllers and aerodrome flight information service officers
67	Requirement for aerodrome information service manual
69	Flight in contravention of restriction of flying regulations
70	Flight by balloons, kites, airships, gliders and parascending parachutes
71	Requirement for licensed aerodrome
73(5)	Contravention of condition of aerodrome licence
74	Use of radio equipment at aerodromes
75	Requirement to keep records at aerodrome
79	Use of aeronautical lights
80(1)	Prohibition of dangerous lights
80(2)	Failure to extinguish or screen dangerous lights
82(1) and (2)	Management of aviation fuel at aerodromes
86 (except (4))	Requirement to report occurrences
89	Obstruction of persons performing duties under Order

# PART B —PROVISIONS REFERRED TO IN ARTICLE 91(6)

Article of Order	Subject Matter
6	Flight for the purpose of public transport without an air operator's certificate
7	Flight without a certificate of airworthiness
43	Prohibition of carriage of weapons and munitions of war
44	Prohibition of carriage of dangerous goods
47	Endangering safety of aircraft
48	Endangering safety of persons or property

Article of Order	Subject Matter
49	Prohibition of drunkenness in aircraft
54(1)	Operator's obligation to regulate flight times of flight crew
54(2)	Operator's obligations not to allow flight by crew in dangerous state of fatigue
55(1)	Crew's obligation not to fly in dangerous state of fatigue
63 (except (3))	Use of false or unauthorised documents and records
82(3)	Use of aviation fuel which is unfit for use in aircraft
84	Restriction of flights for aerial photography and survey by aircraft registered outside the Territory
85	Operator's or commanders' obligations in respect of flights over any foreign country
86(4)	Making false reports
87	Flight in contravention of direction not to fly

#### SCHEDULE 14

Article 64

# RULES OF THE AIR SECTION I

# INTERPRETATION

- 1. In these Rules, unless the context otherwise requires—
  - "Air traffic control clearance" means authorisation by an air traffic control unit for an aircraft to proceed under conditions specified by that unit.
  - "Anti-collison light" means
  - (a) in relation to rotorcraft a flashing red light;
  - (b) in relation to any other aircraft a flashing red or flashing white lights:
  - and in either case showing in all directions for the purpose of enabling the aircraft to be more readily detected by the pilots of distant aircraft.
  - "Apron" means the part of an aerodrome provided for the stationing of aircraft for the embarkation and disembarkation of passengers, the loading and unloading of cargo and parking.
  - "Ground visibility" means the horizontal visibility at ground level.
  - "IFR flight" means a flight conducted in accordance with the Instrument Flight Rules in Section VI of these Rules.

"Manoeuvring area" means the part of an aerodrome provided for the take-off and landing of aircraft and the movement of aircraft on the surface, excluding the apron and any part of the aerodrome provided for the maintenance of aircraft.

"Runway" means an area, whether or not paved, which is provided for the take-off or landing run of aircraft.

"VFR Flight" means a flight conducted in accordance with the Visual Flight Rules in Section V of these Rules.

#### **SECTION II**

#### **GENERAL**

## Application of Rules to Aircraft

- **2.** These Rules, in so far as they are applicable in relation to aircraft, shall, subject to the provisions of Rule 29 of these Rules, apply in relation to—
  - (a) all aircraft within Hong Kong; and
  - (b) all aircraft registered in Hong Kong wherever they may be.

# Misuse of Signals and Markings

- **3.**—(1) A signal or marking to which a meaning is given by these Rules, or which is required by these Rules to be used in circumstances or for a purpose therein specified, shall not be used except with that meaning, or for that purpose.
- (2) A person in an aircraft or on an aerodrome or at any place at which an aircraft is taking off or landing shall not make any signal which may be confused with a signal specified in the Rules and, except with lawful authority, shall not make any signal which he knows or ought reasonably to know to be a signal in use for signalling to or from any of Her Majesty's naval, military or air force aircraft.

#### Reporting hazardous conditions

**4.** The commander of an aircraft shall, on meeting with hazardous conditions in the course of a flight, or as soon as possible thereafter, send to the appropriate air traffic control unit by the quickest means available information containing such particulars of the hazardous conditions as may be pertinent to the safety of other aircraft.

#### Low flying

- **5.**—(1) Subject to the provisions of paragraph (2) and (3) of this Rule:
  - (a) An aircraft other than a helicopter shall not fly over any congested area of a city, town or settlement below—
    - (i) such height as would enable the aircraft to alight clear of the area and without danger to persons or property on the surface, in the event of failure of a power unit and if such an aircraft is towing a banner such height shall be calculated on the basis that the banner shall not be dropped within the congested area; or
    - (ii) a height of 1500 feet above the highest fixed object within 2000 feet of the aircraft, whichever is the higher.
  - (b) A helicopter shall not fly below such height as would enable it to alight without danger to persons or property on the surface, in the event of failure of a power unit.
  - (c) Except with the permission in writing of the Governor and in accordance with any conditions therein specified a helicopter should not fly over a congested area of a city,

town or settlement below a height of 1500 feet above the highest fixed object within 2000 feet of the helicopter.

- (d) An aircraft shall not fly—
  - (i) over, or within 3000 feet of, any assembly in the open air of more than 1000 persons assembled for the purpose of witnessing or participating in any organised event, except with the permission in writing of the Governor and in accordance with any conditions therein specified and with the consent in writing of the organisers of the event; or
  - (ii) below such height as would enable it to alight clear of the assembly in the event of the failure of a power unit and if such an aircraft is towing a banner such height shall be calculated on the basis that the banner shall not be dropped within 3000 feet of the assembly:

Provided that, where a person is charged with an offence under this Order by reason of a contravention of this sub-paragraph, it shall be a good defence to prove that the flight of the aircraft over, or within 3000 feet of, the assembly was made at a reasonable height and for a reason not connected with the assembly or with the event which was the occasion for the assembly.

- (e) An aircraft shall not fly closer than 500 feet to any person, vessel, vehicle or structure.
- (a) (2) (a) The provisions of paragraphs (1)(a)(ii) and (1)(c) of this Rule shall not apply to an aircraft flying—
  - (i) on a route notified for the purposes of this Rule, or
  - (ii) on a special VFR flight as defined in Rule 23 of these Rules in accordance with instructions given for the purposes of that Rule by the appropriate air traffic control unit.
- (b) Paragraphs (1)(d) and (e) of this Rule shall not apply to an aircraft which is being used for police purposes.
- (c) Paragraphs (1)(d) and (e) of this Rule shall not apply to the flight of an aircraft over or within 3000 feet of an assembly of persons gathered for the purpose of witnessing an event which consists wholly or principally of an aircraft race or contest or an exhibition of flying, if the aircraft is taking part in such race, contest or exhibition or is engaged on a flight arranged by, or made with the consent in writing of, the organisers of the event.
- (d) Paragraph (1)(e) of this Rule shall not apply to—
  - (i) any aircraft while it is landing or taking off in accordance with normal aviation practice;
  - (ii) any glider while it is hill-soaring;
  - (iii) any aircraft while it is flying in accordance with proviso (f) of Article 40(2) of this Order;
  - (iv) any aircraft while it is flying in accordance with the terms of an aerial application certificate granted to the operator thereof under Article 42 of this Order;
  - (v) any aircraft while it is flying for the purpose of picking up or dropping tow ropes, banners or similar articles at an aerodrome in accordance with article 39(2) or proviso (e) of article 40(2) of this Order.
- (3) Nothing in this Rule shall prohibit an aircraft from flying in such a manner as is necessary for the purpose of saving life.
- (4) Nothing in this Rule shall prohibit any aircraft from flying in accordance with normal aviation practice, for the purpose of taking off from, landing at or practising approaches to landing at, or

checking navigational aids or procedures at, a Government aerodrome or a licensed aerodrome in Hong Kong or at any aerodrome elsewhere:

Provided that the practising of approaches to landing shall be confined to the airspace customarily used by aircraft when landing or taking off in accordance with normal aviation practice at the aerodrome concerned.

(5) Nothing in this Rule shall apply to any captive balloon or kite.

# Simulated instrument flight

- 6) An aircraft shall not be flown in simulated instrument flight conditions unless—
  - (a) the aircraft is fitted with dual controls, which are functioning properly;
  - (b) an additional pilot (in this Rule called "a safety pilot") is carried in a second control seat of the aircraft for the purpose of rendering such assistance as may be necessary to the pilot of the aircraft; and
  - (c) if the safety pilot's field of vision is not adequate both forward and to each side of the aircraft, a third person, being a competent observer, occupies a position in the aircraft which from his field of vision makes good the deficiencies in that of the safety pilot, and from which he can readily communicate with the safety pilot.

For the purposes of this Rule the expression "simulated instrument flight" means a flight during which mechanical or optical devices are used in order to reduce the field of vision or the range of visibility from the cockpit of the aircraft.

#### Practice Instrument Approaches

- 7) Within Hong Kong an aircraft shall not carry out instrument approach practice when flying in Visual Meteorological Conditions unless—
  - (a) the appropriate air traffic control unit has previously been informed that the flight is to be made for the purpose of instrument approach practice; and
  - (b) if the flight is not being carried out in simulated instrument flight conditions, a competent observer is carried in such a position in the aircraft that he has an adequate field of vision and can readily communicate with the pilot flying the aircraft.

#### SECTION III

# LIGHTS AND OTHER SIGNALS TO BE SHOWN OR MADE BY AIRCRAFT

#### **GENERAL**

- **8.**—(1) For the purposes of this Section of these Rules the horizontal plane of light shown in an aircraft means the plane which would be the horizontal plane passing through the source of that light, if the aircraft were in level flight.
- (2) Where by reason of the physical construction of an aircraft it is necessary to fit more than one lamp in order to show a light required by this Section of these Rules, the lamps shall be so fitted and constructed that, so far as is reasonably practicable, not more than one such lamp is visible from any one point outside the aircraft.
- (3) Where in these Rules a light is required to show through specified angles in the horizontal plane, the lamps giving such light shall be so constructed and fitted that the light is visible from any point in any vertical plane within those angles throughout angles of 90 degrees above and below the horizontal plane, but, so far as is reasonably practicable, through no greater angle, either in the horizontal plane or the vertical plane.

(4) Where in these Rules a light is required to show in all directions, the lamps giving such light shall be so constructed and fitted that, so far as is reasonably practicable, the light is visible from any point in the horizontal plane and on any vertical plane passing through the source of that light.

# Display of lights by aircraft

- (a) **9.** (1) (a) By night an aircraft shall display such of the lights specified in these Rules as may be appropriate to the circumstances of the case, and shall not display any other lights which might obscure or otherwise impair the visibility of, or be mistaken for, such lights.
- (b) By day an aircraft fitted with an anti-collision light shall display such a light in flight.
- (2) A flying machine on an aerodrome in Hong Kong shall:
  - (a) display by night either the lights which it would be required to display when flying or the lights specified in Rule 11(2)(c) of these Rules unless it is stationary on the apron or part of the aerodrome provided for the maintenance of aircraft;
  - (b) display when stationary on the apron by day or night with engines running a red anticollision light, if fitted:

Provided that a helicopter to which Article 25 of the Order applies may, when stationary on an offshore installation, switch off such an anti-collision light in accordance with a procedure contained in the operations manual of the helicopter as a signal to ground personnel that it is safe to approach the helicopter for the purpose of embarkation or disembarkation of passengers or the loading or unloading of cargo.

- (3) Notwithstanding the provisions of this section of the Rules the commander of an aircraft may switch off or reduce the intensity of any flashing light fitted to the aircraft if such a light does or is likely to:
  - (a) adversely affect the performance of the duties of any member of the flight crew; or
  - (b) subject an outside observer to unreasonable dazzle:

#### Failure of navigation and anti-collision lights

- 10.—(1) In Hong Kong, in the event of the failure of any light which is required by these Rules to be displayed at night, if the light cannot be immediately repaired or replaced the aircraft shall not depart from the aerodrome and, if in flight, shall land as soon as in the opinion of the commander of the aircraft it can safely do so, unless authorised by the appropriate air traffic control unit to continue its flight.
- (2) In Hong Kong, in the event of a failure of an anti-collision light when flying by day, an aircraft may continue to fly by day provided that the light is repaired at the earliest practicable opportunity.

# Flying Machines

- 11.—(1) A flying machine when flying at night shall display light as follows:—
  - (a) in the case of a flying machine registered in Hong Kong having a maximum total weight authorised of more than 5,700 kg or any other flying machine registered in Hong Kong which conforms to a type first issued with a type certificate on or after 1st January 1991 the system of lights in paragraph (2)(b) of this rule;
  - (b) in the case of a flying machine registered in Hong Kong which conforms to a type first issued with a type certificate before 1st January 1991 having a maximum total weight authorised of 5,700 kg or less, any one of the following systems of lights:—
    - (i) that specified in paragraph (2)(a) of this Rule, or that specified in paragraph (2)(b); or
    - (ii) that specified in paragraph (2)(d), excluding sub-paragraph (ii);

- (c) in the case of any other flying machines one of the systems of lights specified in paragraph (2) of this Rule.
- (2) The systems of lights referred to in paragraph (1) of this Rule are as follows:—
  - (a) (i) a steady green light of at least five candela showing to the starboard side through an angle of 100 degrees from dead ahead in the horizontal plane; and
    - (ii) a steady red light of at least five candela showing to the port side through an angle of 100 degrees from dead ahead in the horizontal plane; and
    - (iii) a steady white light of at least three candela showing through angles of 70 degrees from dead astern to each side in the horizontal plane;
  - (b) (i) the lights specified in sub-paragraph (a) of this paragraph; and
    - (ii) an anti-collision light;
  - (c) the lights specified in sub-paragraph (a) of this paragraph, but all being flashing lights flashing together;
  - (d) the lights specified in sub-paragraph (a), but all being flashing lights flashing together in alternation with one or both of the following:
    - (i) a flashing white light of at least twenty candela showing in all directions;
    - (ii) a flashing red light of at least twenty candela showing through angles of 70 degrees from dead astern to each side in the horizontal plane.
- (3) If the lamp showing either the red or green light specified in paragraph (2)(a) of this Rule is fitted more than 2 metres from the wing tip, a lamp may, notwithstanding the provisions of Rule 9(1) of these Rules, be fitted at the wing tip to indicate its position showing a steady light of the same colour through the same angle.

#### Gliders

12. A glider while flying at night shall display either a steady red light of at least five candela showing in all directions, or lights in accordance with Rule 11(2) and (3) of these Rules.

#### Free Balloons

13. A free balloon while flying at night shall display a steady red light of at least five candela showing in all directions, suspended not less than 5 metres and not more than 10 metres below the basket, or if there is no basket, below the lowest part of the balloon.

# Captive balloons and kites

- **14.**—(1) A captive balloon or kite while flying at night at a height exceeding 60 metres above the surface shall display lights as follows:—
  - (a) a group of two steady lights consisting of a white light placed 4 metres above a red light, both being of at least five candela and showing in all directions, the white light being placed not less than 5 metres or more than 10 metres below the basket, or if there is no basket, below the lowest part of the balloon or kite;
  - (b) on the mooring cable, at intervals of not more than 300 metres measured from the group of lights referred to in sub-paragraph (a) of this paragraph, groups of two lights of the colour and power and in the relative positions specified in that sub-paragraph, and, if the lowest group of lights is obscured by cloud, an additional group below the cloud base; and
  - (c) on the surface, a group of three flashing lights arranged in a horizontal plane at the apexes of a triangle, approximately equilateral, each side of which measures at least 25 metres; one side of the triangle shall be approximately at right angles to the horizontal projection

of the cable and shall be delimited by two red lights; the third light shall be a green light so placed that the triangle enclose the object on the surface to which the balloon or kite is moored.

- (2) A captive balloon while flying by day at a height exceeding 60 metres above the surface shall have attached to its mooring cable at intervals of not more than 200 metres measured from the basket, or, if there is no basket, from the lowest part of the balloon, tubular streamers not less than 40 centimetres in diameter and 2 metres in length, and marked with alternative bands of red and white 50 centimetres wide.
- (3) A kite flown in the circumstances referred to in paragraph (2) of this Rule shall have attached to its mooring cable either:—
  - (a) tubular streamers as specified in paragraph (2) of this Rule, or
  - (b) at intervals of not more than 100 metres measured from the lowest part of the kite, streamers of not less than 80 centimetres long and 30 centimetres wide at their widest point and marked with alternate bands of red and white 10 centimetres wide.

# Airships

- **15.**—(1) Except as provided in paragraph (2) of this Rule, an airship while flying at night shall display the following:—
  - (a) a steady white light of at least five candela showing through angles of 110 degrees from dead ahead to each side in the horizontal plane;
  - (b) a steady green light of at least five candela showing to the starboard side through an angle of 110 degrees from dead ahead in the horizontal plane;
  - (c) a steady red light of at least five candela showing to the port side through an angle of 110 degrees from dead ahead in the horizontal plane;
  - (d) a steady white light of at least five candela showing through angles of 70 degrees from dead astern to each side in the horizontal plane; and
  - (e) an anti-collision light.
- (2) An airship while flying at night shall display, if it is not under command, or has voluntarily stopped its engines, or is being towed, the following steady lights:—
  - (a) the white lights referred to in paragraph (1)(a) and (d) of this Rule;
  - (b) two red lights, each of at least five candela and showing in all directions suspended below the control car so that one is at least 4 metres above the other and at least 8 metres below the control car; and
  - (c) if the airship is making way but not otherwise, the green and red lights referred to in paragraph (1)(b) and (c) of this Rule:

Provided that an airship while picking up its moorings, notwithstanding that this is not under command, shall display only the lights specified in paragaph (1) of this Rule.

- (3) An airship, while moored within Hong Kong by night, shall display the following steady lights:
  - (a) when moored to a mooring mast, at or near the rear a white light of at least five candela showing in all directions;
  - (b) when moored otherwise than to a mooring mast:—
    - (i) a white light of at least five candela showing through angles of 110 degrees from dead ahead to each side in the horizontal plane;
    - (ii) a white light of at least five candela showing through angles of 70 degrees from dead astern to each side in the horizontal plane.

- (4) An airship while flying by day, if it is not under command, or has voluntarily stopped its engines, or is being towed, shall display two black balls suspended below the control car so that one is at least 4 metres above the other and at least 8 metres below the control car.
  - (5) For the purposes of this Rule:—
    - (a) an airship shall be deemed not to be under command when it is unable to execute a manoeuvre which it may be required to execute by or under these Rules;
    - (b) an airship shall be deemed to be making way when it is not moored and is in motion relative to the air.

#### **SECTION IV**

#### GENERAL FLIGHT RULES

#### Weather reports and forecasts

- **16.**—(1) Immediately before an aircraft flies the commander of the aircraft shall examine the current reports and forecasts of the weather conditions on the proposed flight path, being reports and forecasts which it is reasonably practicable for him to obtain, in order to determine whether Instrument Meteorological Conditions prevail or are likely to prevail during any part of the flight.
- (2) An aircraft which is unable to communicate by radio with an air traffic control unit at the aerodrome of destination shall not begin a flight to an aerodrome within a control zone if the information which it is reasonably practicable for the commander of the aircraft to obtain indicates that it will arrive at that aerodrome when the ground visibility is less than 5 nautical miles or the cloud ceiling is less than 1,500 feet, unless the commander of the aircraft has obtained from an air traffic control unit at that aerodrome permission to enter the aerodrome traffic zone.

# Rules for avoiding aerial collisions

#### **17.**—(1) General

- (a) Notwithstanding that the flight is being made with air traffic control clearance it shall remain the duty of the commander of an aircraft to take all possible measures to ensure that his aircraft does not collide with any other aircraft.
- (b) An aircraft shall not be flown in such proximity to other aircraft as to create a danger of collision.
- (c) Aircraft shall not fly in formation unless the commanders of the aircraft have agreed to do so.
- (d) An aircraft which is obliged by these Rules to give way to another aircraft shall avoid passing over or under the other aircraft, or crossing ahead of it, unless passing well clear of it.
- (e) An aircraft which has the right-of-way under this Rule shall maintain its course and speed.
- (f) For the purposes of this Rule a glider and a flying machine which is towing it shall be considered to be a single aircraft under the command of the commander of the towing flying machine.

#### (2) Converging

- (a) Subject to the provision of paragraphs (3) and (4) of this Rule, an aircraft in the air shall give way to other converging aircraft as follows:—
  - (i) flying machines shall give way to airships, gliders and balloons;
  - (ii) airships shall give way to gliders and balloons;
  - (iii) gliders shall give way to balloons.

(b) Subject to the provisions of sub-paragraph (a) of this paragraph, when two aircraft are converging in the air at approximately the same altitude, the aircraft which has the other on its right shall give way:

Provided that mechanically driven aircraft shall give way to aircraft which are towing other aircraft or objects.

# (3) Approaching head-on

When two aircraft are approaching head-on or approximately so in the air and there is danger of collision, each shall alter its course to the right.

## (4) Overtaking

An aircraft which is being overtaken in the air shall have the right-of-way and the overtaking aircraft, whether climbing, descending or in horizontal flight, shall keep out of the way of the other aircraft by altering course to the right, and shall not cease to keep out of the way of the other aircraft until that other aircraft has been passed and is clear, notwithstanding any change in the relative positions of the two aircraft:

Provided that a glider overtaking another glider in Hong Kong may alter its course to the right or to the left.

# (5) Flight in the vicinity of an aerodrome

Without prejudice to the provision of Rule 35, a flying machine, glider or airship while flying in the vicinity of what the commander of the aircraft knows or ought reasonably to know to be an aerodrome or moving on an aerodrome shall unless, in the case of an aerodrome having an air traffic control unit, that unit otherwise authorises:—

- (a) conform to the pattern of traffic formed by other aircraft intending to land at that aerodrome, or keep clear of the airspace in which the pattern is formed; and
- (b) make all turns to the left unless ground signals otherwise indicate.

# (6) Order of landing

- (a) An aircraft while landing or on final approach to land shall have the right-of-way over other aircraft in flight or on the ground or water;
- (b) In the case of two or more flying machines, gliders or airships approaching any place for the purpose of landing, the aircraft at the lower altitude shall have the right-of-way, but it shall not cut in front of another aircraft which is in the final approach to land or overtake that aircraft:

#### Provided that—

- (i) when an air traffic control unit has communicated to any aircraft an order of priority for landing, the aircraft shall approach to land in that order; and
- (ii) when the commander of an aircraft is aware that another aircraft is making an emergency landing, he shall give way to that aircraft, and at night, notwithstanding that he may have received permission to land, shall not attempt to land until he has received further permission to do so.

# (7) Landing and take-off

- (a) A flying machine, glider or airship shall take-off and land in the direction indicated by the ground signals or, if no such signals are displayed, into the wind, unless good aviation practice demands otherwise.
- (b) A flying machine or glider shall not land on a runway at an aerodrome if the runway is not clear of other aircraft unless, in the case of an aerodrome having an air traffic control unit, that unit otherwise authorises.
- (c) Where take-offs and landings are not confined to a runway—

- (i) a flying machine or glider when landing shall leave clear on its left any aircraft which has landed or is already landing or about to take-off; if such a flying machine or glider is about to turn it shall turn to the left after the commander of the aircraft has satisfied himself that such action will not interfere with other traffic movements; and
- (ii) a flying machine about to take-off shall take up position and manoeuvre in such a way as to leave clear on its left any aircraft which has already taken-off or is about to take-off.
- (d) A flying machine after landing shall move clear of the landing area as soon as it is possible to do so unless in the case of an aerodrome having an air traffic control unit, that unit otherwise authorises.

#### Aerobatic manoeuvres

- **18.** An aircraft shall not carry out any aerobatic manoeuvre:
  - (a) over a congested area of any city, town or settlement; or
  - (b) within controlled airspace except with the consent of the appropriate air traffic control unit.

#### Right-hand traffic rule

19. An aircraft which is flying within Hong Kong in sight of the ground and following a road, railway, canal or coastline, or any other line of landmarks, shall keep such line of landmarks on its left:

Provided that this rule shall not apply to an aircraft flying within controlled airspace notified for the purposes of Rule 21 of these Rules in accordance with instructions given by the appropriate air traffic control unit.

# Notification of arrival and departure

- **20.**—(1) The commander of an aircraft who has caused notice of its intended arrival at any aerodrome to be given to the air traffic control unit or other authority at that aerodrome shall ensure that the air traffic control unit or other authority at that aerodrome is informed as quickly as possible of any change of intended destination and any estimated delay in arrival of 45 minutes or more.
- (2) The commander of an aircraft arriving at or departing from an aerodrome in Hong Kong shall take all reasonable steps to ensure upon landing or prior to departure, as the case may be, that notice of that event be given to the person in charge of the aerodrome, or to the air traffic control unit or aerodrome flight information service unit at the aerodrome.
- (3) Without prejudice to the provisions of Rule 27 to these Rules, before taking off on any flight from an aerodrome in Hong Kong, being a flight whose intended destination is more than 40 kilometres from the aerodrome of departure, the commander of an aircraft of which the maximum total weight authorised exceeds 5700 kg shall cause a flight plan containing such particulars of the intended flight as may be necessary for search and rescue purposes to be communicated to the air traffic control unit notified for the purpose of this Rule.

# Flight in Class A airspace

**21.** In relation to flights in Visual Meteorological Conditions in Class A airspace, the commander of an aircraft shall comply with Rules 27 and 28 of these Rules as if the flights were IFR flights:

Provided that the commander of the aircraft shall not elect to continue the flight in compliance with the Visual Flight Rules for the purposes of Rule 27(3).

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# Choice of VFR or IFR

**22.** Subject to the provisions of Rule 21 of these Rules an aircraft shall always be flown in accordance with the Visual Flight Rules or the Instrument Flight Rules:

Provided that in Hong Kong an aircraft flying at night:

- (a) outside a control zone shall be flown in accordance with the Instrument Flight Rules; or
- (b) in a control zone shall be flown in accordance with the Instrument Flight Rules unless it is on a Special VFR flight.

#### Speed Limitations

- **22A.**—(1) Subject to paragraph (3) an aircraft shall not fly below flight level 100 at a speed which according to its air speed indicator is more than 250 knots unless it is flying in accordance with the terms of a written permission of the Governor.
- (2) The Governor may grant a permission for the purpose of this Rule subject to such conditions as he thinks fit and either generally or in respect of any aircraft or class of aircraft.
  - (3) Paragraph (1) shall not apply to:
    - (a) flight in Class A airspace;
    - (b) flight in Class B airspace;
    - (c) IFR flight in Class C airspace;
    - (d) VFR flight in Class C airspace or VFR flight or IFR flight in class D airspace when authorised by the appropriate air traffic control unit;
    - (e) the flight of an aircraft flying in accordance with the "A Conditions" or the "B Conditions" set forth in Schedule 2 to the Ordinance, when authorised by the appropriate air traffic control unit.

# SECTION V

#### VISUAL FLIGHT RULES

- 23. The Visual Flight Rules shall be as follows:
  - (a) Within Class B airspace:
    - (i) an aircraft flying within Class B airspace at or above flight level 100 shall remain clear of cloud and in a flight visibility of at least 8 kilometres;
    - (ii) an aircraft flying within Class B airspace below flight level 100 shall remain clear of cloud and in a flight visibility of at least 5 kilometres;
  - (b) Within Class C, Class D or Class E airspace:
    - (i) an aircraft flying within Class C, Class D or Class E airspace at or above flight level 100 shall remain at least 1,500 metres horizontally and 1,000 feet vertically away from cloud and in a flight visibility of at least 8 kilometres;
    - (ii) an aircraft flying within Class C, Class D or Class E airspace below flight level 100 shall remain at least 1,500 metres horizontally and 1,000 feet vertically away from cloud and in a flight visibility of at least 5 kilometres;
  - (c) an aircraft flying outside controlled airspace at or above flight level 100 shall remain at least 1,500 metres horizontally and 1,000 feet vertically away from cloud and in a flight visibility of at least 8 kilometres;
  - (d) an aircraft flying outside controlled airspace below flight level 100 shall remain at least 1,500 metres horizontally and 1,000 feet vertically away from cloud and in a flight visibility of at least 5 kilometres:

Provided that this sub-paragraph shall be deemed to be complied with if:

- (i) the aircraft is flying at or below 3,000 feet above mean sea level and remains clear of cloud and in sight of the surface and in a flight visibility of at least 5 kilometres;
- (ii) the aircraft, other than a helicopter, is flying at or below 3,000 feet above mean sea level at a speed which according to its air speed indicator is 140 knots or less and remains clear of cloud and in a flight visibility of at least 1,500 metres; or
- (iii) in the case of a helicopter, the helicopter is flying at or below 3,000 feet above mean sea level flying at a speed, which, having regard to the visibility, is reasonable, and remains clear of cloud and in sight of the surface.

For the purposes of this Rule "Special VFR flight" means a flight made in Instrument Meteorological Conditions or at night in a control zone notified for the purposes of Rule 21 of these Rules in respect of which the appropriate air traffic control unit has given permission for the flight to be made in accordance with special instructions given by that unit instead of in accordance with the Instrument Flight Rules.

# VFR Plans and air traffic control clearance

- **23A.**—(1) Unless otherwise specified by the appropriate air traffic control unit before an aircraft flies within Class B, Class C or Class D airspace during the notified hours of watch of the appropriate air traffic control unit, the commander of the aircraft shall cause a flight plan to be communicated to the appropriate air traffic control unit and shall obtain an air traffic control clearance to fly within the said airspace.
- (2) The flight plan shall contain such particulars of the flight as may be necessary to enable the air traffic control unit to issue a clearance and for search and rescue purposes.
- (3) Whilst flying within the said airspace during the notified hours of watch of the appropriate air traffic control unit the commander of the aircraft shall:
  - (a) cause a continuous watch to be maintained on the notified radio frequency appropriate to the circumstances; and
  - (b) comply with any instructions which the appropriate air traffic control unit may give in a particular case.

#### SECTION VI

#### INSTRUMENT FLIGHT RULES

- **24.** The Instrument Flight Rules shall be as follows:
  - (a) Within controlled airspace:

In relation to flights within controlled airspace Rules 25, 27 and 28 shall apply.

(b) Outside controlled airspace:

In relation to flights outside controlled airspace Rules 25 and 26 shall apply.

# Minimum height

- **25.** Without prejudice to the provisions of Rule 5, in order to comply with the Instrument Flight Rules an aircraft shall not fly at a height of less than 1,000 feet above the highest obstacle within a distance of 5 nautical miles of the aircraft unless:
  - (a) it is necessary for the aircraft to do so in order to land; or
  - (b) the aircraft is flying on a route notified for the purpose of this Rule; or
  - (c) the aircraft has been otherwise authorised by the competent authority; or

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(d) the aircraft is flying at an altitude not exceeding 3000 feet above mean sea level and remains clear of cloud and in sight of the surface.

#### Semi-circular Rule

**26.** In order to comply with the Instrument Flight Rules, an aircraft when in level flight above 3,000 feet above mean sea level or above the appropriate transition altitude, whichever is the higher, shall be flown at a level appropriate to its magnetic track, in accordance with the appropriate Table set forth in this Rule. The level of flight shall be measured by an altimeter set according to the system published by the competent authority in relation to the area over which the aircraft is flying:

Provided that an aircraft may be flown at a level other than the level required by this Rule if it is flying in conformity with instructions given by an air traffic control unit or in accordance with notified enroute holding patterns or in accordance with holding procedures notified in relation to an aerodrome.

For the purposes of this Rule "transition altitude" means the altitude so notified in relation to flight over such area or areas as may be notified.

#### TABLE I

—Flights at levels at or below 24,500 feet	
Magnetic Track	Cruising Level
Less than 180 degress	Odd thousands of feet
180 degrees but less than 360 degrees	Even thousands of feet

#### TABLE II

—Flights at le	evels abov	e 24,500	feet
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Magnetic Track	Cruising Level
Less than 180 degrees	25,000 feet. 27,000 feet. 29,000 feet or higher levels at intervals of 4,000 feet.
180 degrees but less than 360 degrees	26,000 feet. 28,000 feet. 31,000 feet or higher levels at intervals of 4,000 feet.

Flight plan and air traffic control clearance

- 27.—(1) In order to comply with the Instrument Flight Rules, before an aircraft either takes off from a point within any controlled airspace or otherwise flies within any controlled airspace the commander of the aircraft shall cause a flight plan to be communicated to the appropriate air traffic control unit and shall obtain an air traffic control clearance based on such flight plan.
- (2) The flight plan shall contain such particulars of the intended flight as may be necessary to enable the air traffic control unit to issue an air traffic control clearance, or for search and rescue purposes.
  - (3) The commander of the aircraft shall fly in conformity with—
    - (a) the air traffic control clearance issued for the flight, as amended by any further instructions given by an air traffic control unit; and

(b) the holding and instrument approach procedures notified in relation to the aerodrome of destination, unless he is otherwise authorised by the air traffic control unit there:

Provided that he shall not be required to comply with the foregoing provisions of this paragraph if—

- (i) he is able to fly in uninterrupted Visual Meteorological Conditions for so long as he remains in controlled airspace, and
- (ii) he has informed the appropriate air traffic control unit of his intention to continue the flight in compliance with Visual Flight Rules and has requested that unit to cancel his flight plan.
- (4) If for the purpose of avoiding immediate danger any departure is made from the provisions of paragraph (3) of this Rule (as is permitted by Article 64(3) of this Order) the commander of the aircraft shall, in addition to causing particulars to be given in accordance with Article 64(4) of this Order, as soon as possible inform the appropriate air traffic control unit of the deviation.
- (5) The commander of the aircraft after he has flown in controlled airspace shall, unless he has requested the appropriate air traffic control unit to cancel his flight plan, forthwith inform that unit when the aircraft lands or leaves the controlled airspace.

#### Position reports

**28.** In order to comply with the Instrument Flight Rules the commander of an aircraft in IFR flight who flies in or is intending to enter controlled airspace shall report to the appropriate air traffic control unit the time, and the position and level of the aircraft at such reporting points or at such intervals of time as may be notified for this purpose or as may be directed by the air traffic control unit.

# **SECTION VII**

# AERODROME TRAFFIC RULES

Application of aerodrome traffic rules

**29.** The Rules in this Section of these Rules which are expressed to apply to flying machines shall also be observed, so far as is practicable, in relation to all other aircraft.

#### Visual signals

**30.** The commander of a flying machine on, or in the pattern of traffic at, an aerodrome shall observe such visual signals as may be displayed at, or directed to him from, the aerodrome by the authority of the person in charge of the aerodrome and shall obey any instructions which may be given to him by means of such signals:

Provided that he shall not be required to obey the signals referred to in Rule 43 of these Rules (Marshalling Signals) if in his opinion it is inadvisable to do so in the interests of safety.

#### Movement of aircraft on aerodromes

**31.** An aircraft shall not taxi on the apron or the manoeuvring area of an aerodrome without the permission of the person in charge of the aerodrome or, where the aerodrome has an air traffic control unit for the time being notified as being on watch, without the permission of that unit.

Access to and movement of persons and vehicles on the aerodrome

**32.**—(1) A person or vehicle shall not go on to any part of an aerodrome (not being a part of the aerodrome which is a public right of way) without the permission of the person in charge of that part

of the aerodrome, and except in accordance with any conditions subject to which that permission may have been granted.

- (2) A vehicle or person shall not go on to or move on the manoeuvring area of an aerodrome having an air traffic control unit without the permission of that unit, and except in accordance with any conditions subject to which that permission may have been granted.
- (3) Any permission granted for the purposes of this Rule may be granted whether in respect of persons or vehicles generally, or in respect of any particular person or vehicle or any class of person or vehicle.

Right of way on the ground

- **33.**—(1) This Rule shall apply to:
  - (a) flying machines; and
  - (b) vehicles;

on any part of a land aerodrome provided for the use of aircraft and under the control of the person in charge of the aerodrome.

- (2) Notwithstanding any air traffic control clearance it shall remain the duty of the commander of an aircraft to take all possible measures to ensure that his aircraft does not collide with any other aircraft or with any vehicle.
  - (a) (3) (a) Flying machines and vehicles shall give way to aircraft which are taking off or landing.
  - (b) Vehicles, and flying machines which are not taking off or landing, shall give way to vehicles towing aircraft.
  - (c) Vehicles which are not towing aircraft shall give way to aircraft.
- (4) Subject to the provisions of paragaph (3) of this Rule and of Rule 17(7)(c) of these Rules, in case of danger of collision between two flying machines:—
  - (a) when the two flying machines are approaching head-on or approximately so, each shall alter its course to the right;
  - (b) when the two flying machines are on converging courses, the one which has the other on its right shall give way to the other and shall avoid crossing ahead of the other unless passing well clear of it;
  - (c) a flying machine which is being overtaken shall have the right-of-way, and the overtaking flying machine shall keep out of the way of the other flying machine by altering its course to the left until that other machine has been passed and is clear, notwithstanding any change in the relative positions of the two flying machines.
  - (5) Subject to the provisions of paragaph (3)(b) of this Rule a vehicle shall—
    - (a) overtake another vehicle so that the other vehicle is on the left of the overtaking vehicle;
    - (b) keep to the left when passing another vehicle which is approaching head-on or approximately so.

Launching, picking up and dropping of tow ropes etc.

- **34.**—(1) Tow ropes, banners or similar articles towed by aircraft shall not be launched at an aerodrome except in accordance with arrangements made with an air traffic control unit at the aerodrome or, if there is no such unit, with the person in charge of the aerodrome.
- (2) Tow ropes, banners or similar articles towed by aircraft shall not be picked up by or dropped from aircraft at an aerodrome except:—

- (a) in accordance with arrangements with an air traffic control unit at the aerodrome or, if there is no such unit, with the person in charge of the aerodrome; or
- (b) in the area designated by the marking described in Rule 40(7) of these Rules, and the ropes, banners or similar articles shall be picked up and dropped when the aircraft is flying in the direction appropriate for landing.

Flight within aerodrome traffic zones

means of two-way radio communication radio

with aircraft

**35.**—(1) Paragraphs (2) and (3) of this Rule shall apply only in relation to such of the aerodromes described in Column 1 of the following Table as are notified for the purposes of this Rule and at such times as are specified in Column 2 thereof.

#### **TABLE**

Column	1 Column 2
(a)	(a) A Government aerodrome at such times as are notified
	(b) An aerodrome having an air during the notified hours of watch of the air traffic traffic control unit or an aerodrome flight control unit or the aerodrome flight information unit information unit
(c)	(c) A licensed aerodrome having a during the notified hours of watch of the air/ground

- (2) An aircraft shall not fly, take off or land, within the aerodrome traffic zone of an aerodrome to which this paragraph applies unless the commander of the aircraft has obtained the permission of the air traffic control unit at the aerodrome or, where there is no air traffic control unit, has obtained from the aerodrome flight information unit at that aerodrome information to enable the flight within the zone to be conducted with safety or, where there is no air traffic control unit nor aerodrome flight information unit, has obtained information from the air/ground radio station at that aerodrome to enable the flight to be conducted with safety.
- (3) The commander of an aircraft flying within the aerodrome traffic zone of an aerodrome to which this paragraph applies shall:
  - (a) cause a continuous watch to be maintained on the appropriate radio frequency notified for communications at the aerodrome or, if this is not possible, cause a watch to be kept for such instructions as may be issued by visual means;
  - (b) where the aircraft is fitted with means of communication by radio with the ground, communicate his position and height to the air traffic control unit, the aerodrome flight information unit or the air/ground radio station at the aerodrome (as the case may be), on entering the zone and immediately prior to leaving it.

# Use of radio navigation aid

**36.** The commander of an aircraft shall not make use of any radio navigation aid without complying with such restrictions and appropriate procedures as may be notified in relation to that aid unless authorised by the appropriate air traffic control unit:

Provided that he shall not be required to comply with this Rule if he is required to comply with Rule 27 of these Rules.

## **SECTION VIII**

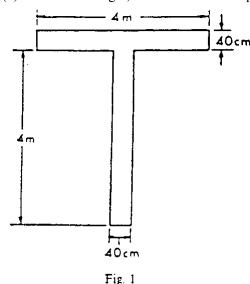
#### AERODROME SIGNALS AND MARKINGS: VISUAL AND AURAL SIGNALS

#### General

- **37.**—(1) Whenever any signal specified in this Section of these Rules is given or displayed, or whenever any marking so specified is displayed, by any person in an aircraft, or at an aerodrome, or any other place which is being used by aircraft for landing or take-off, it shall, when given or displayed in Hong Kong, have the meaning assigned to it in this Section.
- (2) All dimensions specified in this Section of these Rules shall be subject to a tolerance of 10 per cent, plus or minus.

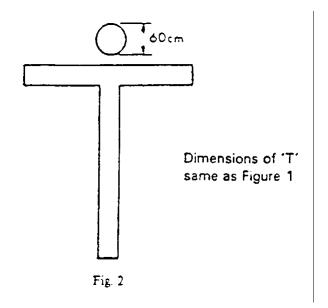
#### Signals in the signals area

- **38.**—(1) When any signal specified in the following paragraphs of this Rule is displayed it shall be placed in a signals area, which shall be a square visible in all directions bordered by a white stripe 30 centimetres wide the internal sides measuring 12 metres.
  - (2) A white landing T, as illustrated in this paragraph,



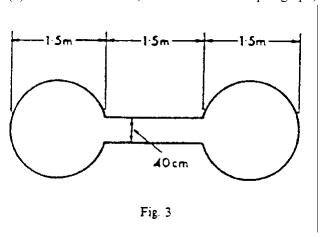
signifies that aeroplanes and gliders taking off or landing shall do so in a direction parallel with the shaft of the T and towards the cross arm, unless otherwise authorised by the appropriate air traffic control unit.

(3) A white disc 60 centimetres in diameter displayed alongside the cross arm of the T and in line with the shaft of the T, as illustrated in this paragraph,



signifies that the direction of landing and take-off do not necessarily coincide.

(4) A white dumb-bell, as illustrated in this paragraph,



signifies that movements of aeroplanes and gliders on the ground shall be confined to paved, metalled or similar hard surfaces.

(5) A white dumb-bell as described in (4) above but with a black stripe 60 centimetres wide across each disc at right angles to the shaft of the dumb-bell, as illustrated in this paragraph,

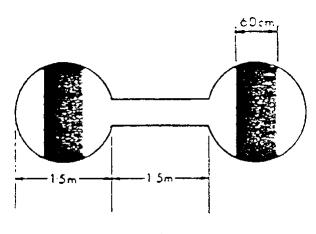


Fig. 4

signifies that aeroplanes and gliders taking off or landing shall do so on a runway but that movement on the ground is not confined to paved, metalled or similar hard surfaces.

(6) A red and yellow striped arrow, as illustrated in this paragraph,

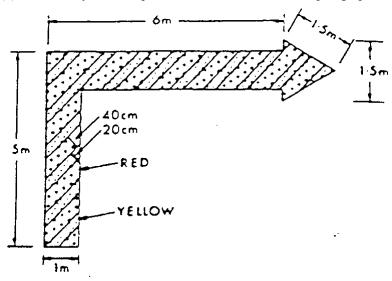
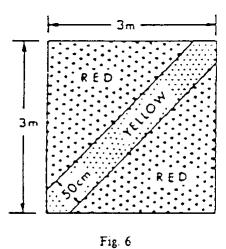


Fig. 5

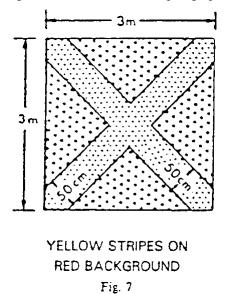
the shaft of which is at least one metre wide placed along the whole or not less than a total of 11 metres of two adjacent sides of the signals area and pointing in a clockwise direction signifies that a right-hand circuit is in force.

(7) A red panel 3 metres square with a yellow stripe along one diagonal at least 50 centimetres wide, as illustrated in this paragraph,



signifies that the state of the manoeuvring area is poor and pilots must exercise special care when landing.

(8) A red panel 3 metres square with a yellow stripe, at least 50 centimetres wide, along each diagonal, as illustrated in this paragraph,



signifies that the aerodrome is unsafe for the movement of aircraft and that landing on the aerodrome is prohibited.

(9) A white letter H, as illustrated in this paragraph,

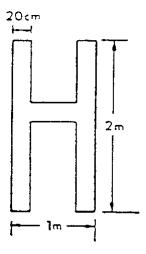
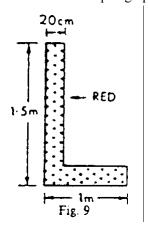


Fig. 8

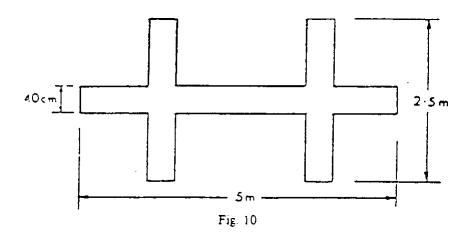
signifies that helicopters shall take off and land only within the area designated by the marking specified in Rule 40(5) of these Rules.

(10) A red letter L displayed on the dumb-bell specified in paragraphs (4) and (5) of this Rule, as illustrated in this paragraph,



signifies that light aircraft are permitted to take off and land either on a runway or on the area designated by the marking specified in Rule 40(6) of these Rules.

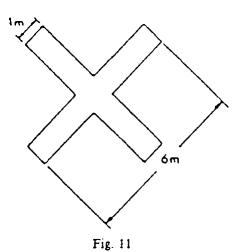
(11) A white double cross, as illustrated in this paragraph,



signifies that glider flying is in progress.

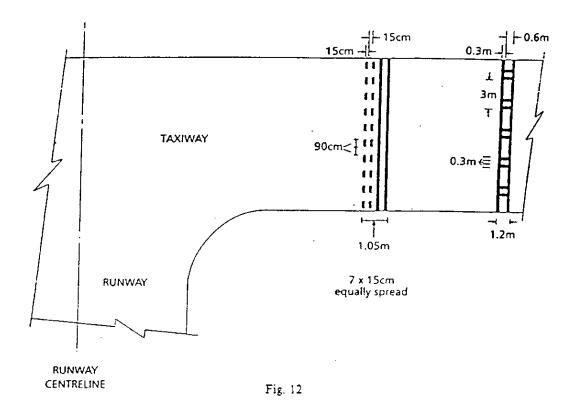
Markings for Paved Runways and Taxiways

**39.**—(1) Two or more white crosses, as illustrated in this paragraph,



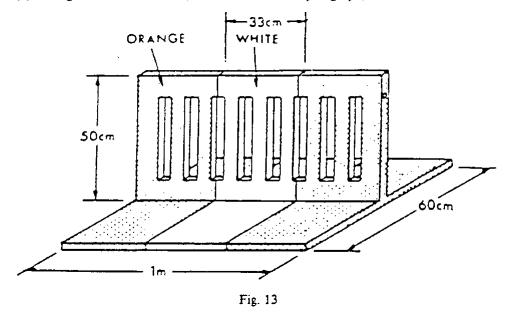
displayed on a runway or taxiway, with the arms of the crosses at an angle of 45° to the centre line of the runway, at intervals of not more than 300 metres signify that the section of the runway or taxiway marked by them is unfit for the movement of aircraft.

(2) Two white continuous lines or two white broken lines and two continuous lines, as illustrated in this paragraph,



signify a holding position beyond which no part of an aircraft or vehicle shall project in the direction of the runway without permission from an air traffic control unit.

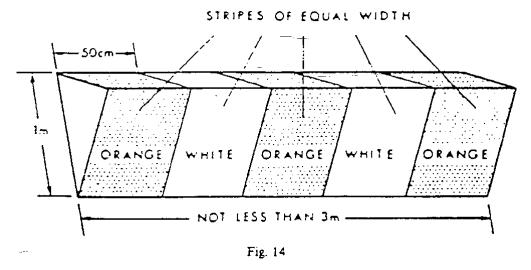
(3) Orange and white markers, as illustrated in this paragraph,



spaced not more than 15 metres apart, signify the boundary of that part of a paved runway, taxiway or apron which is unfit for the movement of aircraft.

Markings on unpaved manouevring areas

**40.**—(1) Markers with orange and white stripes of an equal width of not less than 50 centimetres, with an orange stripe at each end, as illustrated in this paragraph,



alternating with flags not less than 60 centimetres square showing equal orange and white triangular areas, indicate the boundary of an area unfit for the movement of aircraft and one or more white crosses as specified in Rule 39(1) of these Rules indicate the said area. The distance between any two successive orange and white flags shall not exceed 90 metres.

- (2) Striped markers, as specified in paragraph (1) of this Rule, spaced not more than 45 metres apart, indicate the boundary of an aerodrome.
- (3) On structures, markers with orange and white vertical stripes, of an equal width of not less than 50 centimetres, with an orange stripe at each end, as illustrated in this paragraph,

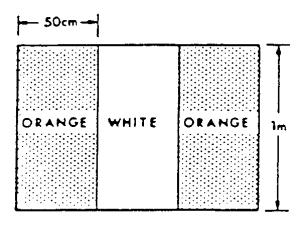


Fig. 15

spaced not more than 45 metres apart, indicate the boundary of an aerodrome. The pattern of the marker shall be visible from inside and outside the aerodrome and the marker shall be affixed not more than 15 centimetres from the top of the structure.

- (4) White flat rectangular markers 3 metres long and 1 metre wide at intervals not exceeding 90 metres, flush with the surface of the unpaved runway or stopway, as the case may be, indicate the boundary on an unpaved runway or of a stopway.
  - (5) A white letter H, as illustrated in this paragraph,

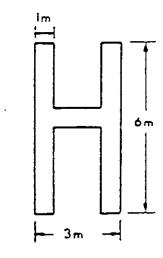
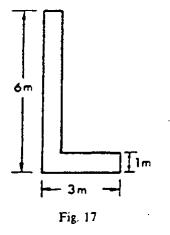


Fig. 16

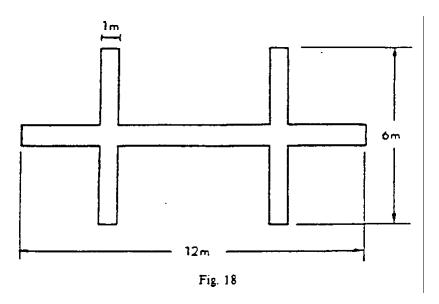
indicates an area which shall be used only for the taking off and landing of helicopters.

(6) A white letter L, as illustrated in this paragraph,



indicates a part of the manoeuvring area which shall be used only for the taking off and landing of light aircraft.

- (7) A yellow cross with two arms 6 metres long by 1 metre wide at right angles, indicates that tow ropes and similar articles towed by aircraft shall only be picked up and dropped in the area in which the cross is placed.
  - (8) A white double cross, as illustrated in this paragraph,

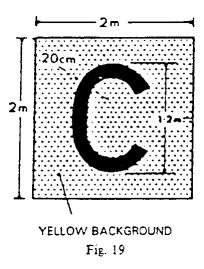


indicates an area which shall be used only for the taking off and landing of gliders.

(9) A white landing T as specified in Rule 38(2) of these Rules placed at the left hand side of the runway when viewed from the direction of landing indicates the runway to be used, and at an aerodrome with no runway it indicates the direction for take-off and landing.

Signals visible from the ground

- **41.**—(1) A black ball 60 centimetres in diameter suspended from a mast signifies that the directions of take-off and landing are not necessarily the same.
- (2) A checkered flag or board, 1.2 metres by 90 centimetres containing twelve equal squares, 4 horizontally and 3 vertically, coloured red and yellow alternately, signifies that aircraft may move on the manoeuvring area and apron only in accordance with the permission of the air traffic control unit at the aerodrome.
- (3) Two red balls 60 centimetres in diameter, disposed vertically one above the other, 60 centimetres apart and suspended from a mast, signify that glider flying is in progress at the aerodrome.
- (4) Black arabic numerals in two-figure groups and, where parallel runways are provided the letter or letters L (left), LC (left centre), C (centre), RC (right centre) and R (right), placed against a yellow background, indicate the direction for take-off for the runway in use.
  - (5) A black letter C against a yellow background, as illustrated in this paragraph,



indicates the position at which a pilot can report to the air traffic control unit or to the person in charge of the aerodrome.

(6) A rectangular green flag of not less than 60 centimetres square flown from a mast indicates that a right hand circuit is in force.

Lights and pyrotechnic signals for control of aerodrome traffic

**42.** Each signal described in the first column of Table A, when directed from an aerodrome to an aircraft or to a vehicle, or from an aircraft, shall have the meanings respectively appearing in the second, third and fourth columns of that Table opposite the description of the signal.

**Table A**Meaning of Lights and Pyrotechnic Signals

	From an aerodrome		
Characteristic and colour of light or pyrotechnic	to an aircraft in flight	to an aircraft or vehicle on the aerodrome	From an aircraft in flight to an aerodrome
(a) Continuous red light	Give way to other aircraft and continue circling.	Stop	_
(b) Red pyrotechnic light, or red flare	Do not land; wait for permission.	_	Immediate assistance is requested.
(c) Red flashes	Do not land; aerodrome not available for landing.	Move clear of landing area.	_
(d) Green flashes	Return to aerodrome; wait for permission to land.	To an aircraft: You may move on the manoeuvring area and apron;	_

Characteristic and colour of light or pyrotechnic	From an aerodrome to an aircraft in flight	to an aircraft or vehicle on the aerodrome	From an aircraft in flight to an aerodrome
		To a vehicle: You may move on the manoeuvring area.	
(e) Continuous green light	You may land.	You may take off (not applicable to a vehicle).	_
(f) Continuous green light, or green flashes, or green pyrotechnic light			By night: May I land? By day: May I land in direction different from that indicated by landing T?
(g) White flashes	Land at this aero- drome after receiving continuous green light, and then, after receiving green flashes, proceed to the apron.	Return to starting point on the aerodrome.	I am compelled to land.
(h)	_	_	I am compelled to land.
White pyrotechnic lights			
Switching on and off the navigation lights			
Switching on and off the landing lights			

Marshalling signals (from a marshaller to an aircraft)

**43.** Each of the signals for the guidance of aircraft manoeuvring on or off the ground, described in the first column of Table B, paragraphs (a) to (x) shall, in Hong Kong have the meanings set forth in the second column of that Table opposite the description of the signal. By day any such signals shall be given by hand or by circular bats and by night by torches or illuminated wands.

Table B—Meaning of marshalling signals (Rule 43)

Description of signal	Meaning of signal	In daylight	By night
(a) Right or left arm down, the other arm moved across body and extended to indicate position of the other marshaller.	Proceed under guidance of another marshaller.	O=	
(b) Arms repeatedly moved upward and backward, beckoning onward.	Move ahead.		
(c) Right arm down, left arm repeatedly moved upward and backward. The speed of arm movement indicates the rate of turn.	Open up starboard engine or turn to port.		
(d) Left arm down, the right arm repeatedly moved upward and backward. The speed of arm movement indicates the rate of turn.	Open up port engine or turn to starboard.		
(e) Arms repeatedly crossed above the head. The speed of arm movement indicates the urgency of the stop.	Stop.	0000	

Description of signal	Meaning of signal	In daylight	By night
(f) A circular motion of the right hand at head level, with the left arm pointing to the appropriate engine.	Start engines.		
(g) Arms extended, the palms facing inwards, then swung from the extended position inwards.	Chocks inserted.		
(h) Arms down, the palms facing outwards, then swung outwards.	Chocks away.		
(j) Either arm and hand placed level with the chest, then moved laterally with the palm downwards.	Cut engines.		
(k) Arms placed down, with the palms towards the ground, then moved up and down several times.	Slow down.		

Description of signal	Meaning of signal	In daylight	By night
(l) Arms placed down, with the palms towards the ground, then either the right or left arm moved, up and down indicating that the motors on the left or right side, as the case may be, should be slowed down.	Slow down engines on indicated side.		
(m) Arms placed above the head in a vertical position.	This bay.		
(n) The right arm raised at the elbow, with the arm facing forward.	All clear: marshalling finished.	9	
(o) Arms placed horizontally sideways.	Hover.		
(p) Arms placed down and crossed in front of the body.	Land.		

Description of signal	Meaning of signal	In daylight	By night	_
(q) Arms placed horizontally sideways with the palms up beckoning upwards. The speed of arm movement indicates the rate of ascent.	Move upwards.			102
(r) Arms placed horizontally sideways with the palms towards the ground beckoning downwards. The speed of arm movement indicates the rate of descent.	Move downwards.			
(s) Either arm placed horizontally sideways, then the other arm moved in front of the body to that side, in the directon of the movement, indicating that the helicopter should move horizontally to the left or right side, as the case may be; repeated several times.	Move horizontally.	0		
			DC 1	# <del>*</del>

**Status:** This is the original version (as it was originally made). This item of legislation is currently only available in its original format.

Description of signal	Meaning of signal	In daylight	By night	
(t) Arms placed down, the palms facing forward, then repeatedly swept up and down to shoulder level.	Move back.			
(u) Left arm extended horizontally forward, then right arm making a horizontal slicing movement below left arm.	Release load.			
(v) Raise arm, with fist clenched, horizontally in front of body, then extend fingers.	Relase brakes.			
Raise arm and hand, with fingers extended, horizontally in front of body, then clench fist.	Engage brakes.			
(w) Left hand overhead with the number of fingers extended, to indicate the number of the engine to be started, and circular motion of right hand at head level.	Start engine(s).			

Description of signal	Meaning of signal	In daylight	By night
(x) Point left arm down, move right arm down from overhead, vertical position to horizontal forward position, repeating right arm movement.	Back aircraft's tail to starboard.		
Point right arm down, move left arm down from overhead, vertical position to horizontal forward position, repeating left arm movement.	Back aircraft's tail to port.		

Marshalling signals (from a pilot of an aircraft to a marshaller)

**44.** The following signals made by a pilot in an aircraft to a marshaller on the ground shall respectively have the following meanings:

D : Ca: 1	1.6 · CC· 1
Description of Signal	Meaning of Signal
(a) Raise arm and hand with fingers extended horizontally in front of face, then clench fist.	Brakes engaged
(b) Raise arm with fist clenched horizontally in front of face, then extend fingers.	Brakes released
(c) Arms extended palms facing outwards, move hands inwards to cross in front of face.	Insert chocks
(d) Hands crossed in front of face, palms facing outwards, move arms outwards.	Remove chocks
(e) Raise the number of fingers on one hand indicating the number of the engine to be started. For this purpose the aircraft engines shall be numbered in relation to the marshaller facing the aircraft, from his right to his left for example, No. 1 engine shall be the port outer engine, No. 2 engine shall be the port inner engine, No. 3 engine shall be the starboard inner engine, and No. 4 engine shall be the starboard outer engine.	Ready to start engines

Status: This is the original version (as it was originally made). This item of legislation is currently only available in its original format.

Distress,	urgency	and sa	fety	signa	ls

- **45.**—(1) The following signals, given either together or separately before the sending of a message, signify that an aircraft is threatened by grave and imminent danger and requests immediate assistance—
  - (a) by radiotelephony—

the spoken word "MAYDAY";

- (b) visual signalling—
  - (i) the signal SOS  $(\dots ---\dots)$ ;
  - (ii) a succession of pyrotechnic lights fired at short intervals each showing a single red light;
  - (iii) a parachute flare showing a red light;
- (c) by sound signalling other than radiotelephony—
  - (i) the signal SOS  $(\ldots ---\ldots)$ ;
  - (ii) a continuous sounding with any sound apparatus.
- (2) The following signals, given either together or separately, before the sending of a message signify that the commander of the aircraft wishes to give notice of difficulties which compel it to land but that he does not require immediate assistance—
  - (a) a succession of white pyrotechnic lights;
  - (b) the repeated switching on and off of the aircraft landing lights;
  - (c) the repeated switching on and off of its navigation lights, in such a manner as to be clearly distinguishable from the flashing navigation lights described in Rule 11 of these Rules.
- (3) The following signals, given either together or separately, indicate that the commander of the aircraft has an urgent message to transmit concerning the safety of a ship, aircraft, vehicle or other property or of a person on board or within sight of the aircraft from which the signal is given—
  - (a) by radiotelephony—the spoken words "PAN PAN";
  - (b) by visual signalling—the signal XXX (-..--.);
  - (c) the sound signalling other than radiotelephony—the signal XXX (-..-..-).

#### Warning signals to aircraft in flight

In Hong Kong by day or by night, a series of projectiles discharged from the ground at intervals of 10 seconds, each showing, on bursting, red and green lights or stars, shall indicate to the commander of an aircraft that his aircraft is flying in or about to enter an active danger area or an area to which regulations made pursuant to Article 69(1)(a)(iii) of this Order relate and that he is required to take such action as may be necessary to leave the area or change course to avoid the area.

#### SCHEDULE 15

Article 9(3)(a)(iii), 11(3) and(6)(a)(iii), 14, 27(1)(c), 28(4),29(1), 36, 78 and 86(1)

#### AIR NAVIGATION (GENERAL) REGULATIONS

#### Load Sheets

- 1.—(1) Every load sheet required by Article 28(4) of this Order shall contain the following particulars:
  - (a) the nationality and registration mark of the aircraft to which the load sheet relates;
  - (b) particulars of the flight to which the load sheet relates;
  - (c) the total weight of the aircraft as loaded for that flight;
  - (d) the weights of the several items from which the total weight of the aircraft, as so loaded, has been calculated including in particular the weight of the aircraft prepared for service and the respective total weights of the crew (unless included in the weight of the aircraft prepared for service), passengers, baggage and cargo intended to be carried on the flight;
  - (e) the manner in which the load is distributed and the resulting position of the centre of gravity of the aircraft which may be given approximately if and to the extent that the relevant certificate of airworthiness so permits,

and shall include a certificate, signed by the person referred in Article 28(1) of this Order as responsible for the loading of the aircraft, that the aircraft has been loaded in accordance with the written instructions furnished to him by the operator of the aircraft pursuant to the said Article 28(1).

(a) (2) (a) For the purpose of calculating the total weight of the aircraft the respective total weights of the passengers and crew entered in the load sheet shall be computed from the actual weight of each person and for that purpose each person shall be separately weighed; Provided that, in the case of an aircraft of which the maximum total weight authorised exceeds 5,700 kg or which has a total seating capacity authorised by the certificate of airworthiness in force in respect of that aircraft of 12 or more persons, the total weights of the passengers and crew may, subject to the provisions of sub-paragraph (b) of this paragraph and of paragraph (4) of this regulation, be calculated at not less than the appropriate weights shown in Table 1 and the load sheet shall bear a notation to that effect—

### Table 1

Males over 12 years of age	75 kg.
` '	s) and—
the approriate weight for male passengers over 12 years shall be	e
Females over 12 years of age	65 kg.
Children aged 2 years or more, but not over 12 years of age	39 kg.

- (b) The actual weight of any immersion suit worn or carried by a passenger or crew member shall be added to the appropriate weight shown in Table 1 in each case.
- (c) For the purposes of this regulation, "sea" includes any estuary or arm of the sea.
- (a) (3) (a) For the purpose of calculating the total weight of the aircraft the respective total weights of the baggage and cargo entered in the load sheet shall be computed from the actual weight of each piece of baggage, cargo or cargo container and for that purpose each piece or container shall be separately weighed;

Provided that, in the case of an aeroplane of which the maximum total weight authorised exceeds 5,700 kg, or which has a total seating capacity of 12 or more persons, the total weight of the baggage may, subject to the provisions of paragraph (4) of this Regulation, be calculated at not less than the weights shown in Table 2 and the load sheet shall bear a notation to that effect;

Table 2

1	2	
Cabin baggage per passenger*	Hold baggage per piece	
3 kg	16 kg	
* Not infants under 2 years of age		

- (a) If Table 2 has been used, subject to the provision of paragraph (4) for determining the weight of hold baggage, it shall also be used, subject as aforesaid, for determining the weight of the cabin baggage.
- (a) (4) (a) If it appears to the person supervising the loading of the aircraft that any passenger or baggage to be carried exceeds the weights set out in Table 1 or Table 2 of this Regulation he shall, if he considers it necessary in the interests of the safety of the aircraft, or if the Governor has so directed in the particular case, require any such person or baggage to be weighed for the purpose of the entry to be made in the load sheet.
- (b) If any person or baggage has been weighed pursuant to sub-paragraph (a) of this paragraph, the weights entered in the load sheet shall take account of the actual weight of that person or baggage, or of the weight determined in accordance with the respective provisos to paragraph (2) or (3), whichever weight shall be the greater.

## Weight and Performance: General provisions

**2.**—(1) The assessment of the ability of an aeroplane to comply with the requirement of Regulations 3 to 8 inclusive and of a helicopter to comply with the requirements of Regulations 9 to 11 inclusive (relating in either case to weight, performance and flights in specified meteorological conditions or at night) shall be based on the specified information as to its performance:

Provided that, in the case of an aeroplane in respect of which there is in force under this Order a certificate of airworthiness which does not include a performance group classification, the assessment may be based on the best information available to the commander of the aircraft, in so far as the relevant information is not specified.

(2) In assessing the ability of an aeroplane to comply with condition (7) in the Annex hereto, conditions (4) and (5) of Regulation 4, and conditions (2)(i)(b) and (2)(ii) of Regulation 8, account may be taken of any reduction of the weight of the aeroplane which may be achieved after the failure of a power unit by such jettisoning of fuel as is feasible and prudent in the circumstances of the

flight and in accordance with the flight manual included in the certificate of airworthiness relating to the aircraft.

(3) In Regulations 2 to 11 inclusive, and in the Annex hereto, unless the context otherwise requires:

"specified" in relation to an aircraft means specified in, or ascertainable by reference to—

- (a) the certificate of airworthiness in force under this Order in respect of that aircraft; or
- (b) the flight manual or performance schedule included in that certificate, or other document, whatever its title, incorporated by reference in that certificate;

"the emergency distance available" means the distance from the point on the surface of the aerodrome at which the aeroplane can commence its take-off run to the nearest point in the direction of take-off at which the aeroplane cannot roll over the surface of the aerodrome and be brought to rest in an emergency without risk of accident;

"the landing distance available" means the distance from the point on the surface of the aerodrome above which the aeroplane can commence its landing, having regard to the obstruction in its approach path, to the nearest point in the direction of landing at which the surface of the aerodrome is incapable of bearing the weight of the aeroplane under normal operating conditions or at which there is an obstacle capable of affecting the safety of the aeroplane;

"the take-off distance available" means either the distance from the point on the surface of the aerodrome at which the aeroplane can commence its take-off run to the nearest obstacle in the direction of take-off projecting above the surface of the aerodrome and capable of affecting the safety of the aeroplane or one and one half times the take-off run available whichever is the less;

"the take-off run available" means the distance from the point on the surface of the aerodrome at which the aeroplane can commence its take-off run to the nearest point in the direction of take-off at which the surface of the aerodrome is incapable of bearing the weight of the aeroplane under normal operating conditions.

- (4) For the purposes of Regulations 2 to 8 inclusive, and of the Annex hereto:
  - (a) the weight of the aeroplane at the commencement of the take-off run shall be taken to be its gross weight including everything and everyone carried in or on it at the commencement of the take-off run;
  - (b) the landing weight of the aeroplane shall be taken to be the weight of the aeroplane at the estimated time of landing allowing for the weight of the fuel and oil expected to be used on the flight to the aerodrome at which it is intended to land or alternate aerodrome, as the case may be;
  - (c) where any distance referred to in paragraph (3) of this Regulation has been declared in respect of any aerodrome by the authority responsible for regulating air navigation over the territory of the Contracting State in which the aerodrome is situated and in the case of an aerodrome in Hong Kong notified, that distance shall be deemed to be the relevant distance.
- (5) Nothing in Regulations 2 to 11 inclusive shall apply to any aircraft flying solely for the purpose of training persons to perform duties in aircraft.

Weight and Performance of Public Transport Aeroplanes having no Performance Group Classification in their Certificates of Airworthiness

3. With reference to Article 29(1) of this Order an aeroplane registered in Hong Kong in respect of which there is in force under this Order a certificate of airworthiness which does not include a performance group classification shall not fly for the purpose of public transport unless the weight

of the aeroplane at the commencement of the take-off run is such that such of the conditions in the Annex hereto as apply to that aircraft are satisfied.

Weight and Performance of Public Transport Aeroplanes classified as Aeroplanes of Performance Group A in their Certificates of Airworthiness.

- **4.** With reference to Article 29(1) of this Order an aeroplane registered in Hong Kong in respect of which there is in force under this Order a certificate of airworthiness in which the aeroplane is designated as being of performance group A shall not fly for the purpose of public transport unless the weight of the aeroplane at the commencement of the take-off run is such that the following conditions are satisfied:
- (1) That weight does not exceed the maximum take-off weight for altitude and temperature specified for the altitude and the air temperature at the aerodrome at which the take-off is to be made.
- (2) The take-off run, take-off distance and the emergency distance respectively required for take-off, specified as being appropriate to—
  - (a) the weight of the aeroplane at the commencement of the take-off run;
  - (b) the altitude at the aerodrome;
  - (c) the air temperature at the aerodrome;
  - (d) the condition of the surface of the runway from which the take-off will be made;
  - (e) the slope of the surface of the aerodrome in the direction of take-off over the take-off run available, the take-off distance available and the emergency distance available, respectively; and
  - (f) not more than 50 per cent of the reported wind component opposite to the direction of take-off or not less than 150 per cent of the reported wind component in the direction of take-off,

do not exceed the take-off run, the take-off distance and the emergency distance available, respectively, at the aerodrome at which the take-off is to be made; in ascertaining the emergency distance required, the point at which the pilot is assumed to decide to discontinue the take-off shall not be nearer to the start of the take-off run than the point at which, in ascertaining the take-off run required and the take-off distance required, he is assumed to decide to continue the take-off, in the event of power unit failure.

- (a) (3) (a) The net take-off flight path with one power unit inoperative, specified as being appropriate to:—
  - (i) the weight of the aeroplane at the commencement of the take-off run;
  - (ii) the altitude at the aerodrome;
  - (iii) the air temperature at the aerodrome; and
  - (iv) not more than 50 per cent of the reported wind component opposite to the direction of take-off or not less than 150 per cent of the reported wind component in the direction of take-off,

and plotted from a point 35 feet or 50 feet, as appropriate, above the end of the take-off distance required at the aerodrome at which the take-off is to be made to a height of 1,500 feet above the aerodrome, shows that the aeroplane will clear any obstacle in its path by a vertical interval of at least 35 feet; and if it is intended that the aeroplane shall change its direction of flight by more than 15° the vertical interval shall not be less than 50 feet during the change of direction.

(b) For the purpose of sub-paragraph (a) hereof an obstacle shall be deemed to be in the path of the aeroplane if the distance from the obstacle to the nearest point on the ground below the intended line of flight of the aeroplane does not exceed—

- (i) a distance of 60 metres plus half the wing span of the aeroplane plus one eighth of the distance from such point to the end of the take-off distance available measured along the intended line of flight of the aeroplane; or
- (ii) 900 metres,

whichever is the less.

- (c) In assessing the ability of the aeroplane to satisfy this condition, it shall not be assumed to make a change of direction of a radius less than the specified radius of steady turn.
- (4) The aeroplane will, in the meteorological conditions expected for the flight, in the event of any one power unit becoming inoperative at any point on its route or on any planned diversion therefrom and with the other power unit or units operating within the maximum continuous power conditions specified be capable of continuing the flight, clearing by a vertical interval of at least 2,000 feet obstacles within 10 nautical miles either side of the intended track to an aerodrome at which it can comply with condition (7) in this Regulation relating to an alternate aerodrome and on arrival over such aerodrome the gradient of the specified net flight path with one power unit inoperative shall not be less than zero at 1,500 feet above the aerodrome, and in assessing the ability of the aeroplane to satisfy this condition it shall not be assumed to be capable of flying at an altitude exceeding the specified maximum permissible altitude for power unit restarting:

Provided that where the operator of the aeroplane is satisfied, taking into account the navigation aids which can be made use of by the aeroplane on the route, that the commander of the aeroplane will be able to maintain his intended track on that route within a margin of 5 nautical miles, the foregoing provisions of this paragraph shall have effect as if 5 nautical miles were substituted for 10 nautical miles.

(5) In the case of an aeroplane having three or more power units, it will, in the meteorological conditions expected for the flight, in the event of any two power units becoming inoperative at any point along the route or on any planned diversion therefrom more than 90 minutes flying time in still air at the all power units operating economical cruising speed from the nearest aerodrome at which it can comply with condition (7) in this Regulation, relating to an alternate aerodrome, be capable of continuing the flight with all other power units operating within the specified maximum continous power conditions, clearing by a vertical interval of at least 2,000 feet obstacles within 10 nautical miles either side of the intended track to such an aerodrome, and on arrival over such an aerodrome the gradient of the specified net flight path with two power units inoperative shall not be less than zero at 1,500 feet above the aerodrome; and in assessing the ability of the aeroplane to satisfy this condition it shall not be assumed to be capable of flying at an altitude exceeding the specified maximum permissible altitude for power unit restarting:

Provided that where the operator of the aeroplane is satisfied taking into account the navigation aids which can be made use of by the aeroplane on the route, that the commander of the aeroplane will be able to maintain his intended track on the route within a margin of five nautical miles, the foregoing provisions of this paragraph shall have effect as if five nautical miles were substituted for 10 nautical miles; or

In the case of an aeroplane having two power units and a maximum total weight authorised which exceeds 5,700 kg, and which is not limited by its certificate of airworthiness to the carriage of less than 20 passengers, it will, in the meteorological conditions expected for the flight, at any point along the route or on any planned diversion therefrom, not be more than 60 minutes flying time at the normal one engine inoperative cruise speed in still air from the nearest aerodrome at which it can comply with condition (7) in this Regulation, relating to an alternate aerodrome, unless it is flying under and in accordance with the terms of any written permission granted by the Governor to the operator under this Regulation; or

In the case of an aeroplane having two power units and a maximum total weight authorised of 5,700 kg or less or in the case of an aeroplane having two power units and a maximum total

weight authorised of more than 5,700 kg, but which is limited by its certificate of airworthiness to the carriage of less than 20 passengers the aeroplane will, in the meterological conditions expected for the flight, not be more than 90 minutes flying time in still air at the all power units operating economical cruising speed from the nearest aerodrome at which it can comply with condition (7) in this regulation, relating to an alternate aerodrome.

- (6) The landing weight of the aeroplane will not exceed the maximum landing weight specified for the altitude and the expected air temperature for the estimated time of landing at the aerodrome at which it is intended to land and at any alternate aerodrome.
  - (a) (i) In the case of a turbine-jet powered aeroplane, the landing distance required does not exceed at the aerodrome at which it is intended to land or at any alternate aerodrome, as the case may be, the landing distance available on—
    - (aa) the most suitable runway for a landing in still air conditions; and
    - (bb) the runway that may be required for landing because of the forecast wind conditions.
    - (ii) In the case of an aeroplane powered by turbine propeller or piston engines, the landing distances required, respectively specified as being appropriate to aerodromes of destination and alternate aerodromes, do not exceed at the aerodrome at which it is intended to land or at any alternate aerodrome, as the case may be, the landing distance available on—
      - (aa) the most suitable runway for a landing in still air conditions; and
      - (bb) the runway that may be required for landing because of the forecast wind conditions:

Provided that if an alternate aerodrome is designated in the flight plan, the specified landing distance required may be that appropriate to an alternate aerodrome when assessing the ability of the aeroplane to satisfy this condition at the aerodrome of destination.

- (b) For the purposes of sub-paragraph (a) hereof the landing distance required shall be that specified as being appropriate to—
  - (i) the landing weight;
  - (ii) the altitude at the aerodrome;
  - (iii) the temperature in the specified international standard atmosphere appropriate to the altitude at the aerodrome;
  - (iv) (aa) a level surface in the case of runways usable in both directions;
    - (bb) the average slope of the runway in the case of runways usable in only one direction; and
  - (v) (aa) still air conditions in the case of the most suitable runway for a landing in still air conditions;
    - (bb) not more than 50 per cent of the forecast wind component opposite to the direction of landing in the case of the runway that may be required for landing because of the forecast wind conditions.

Weight and Performance of Public Transport Aeroplanes classified as Aeroplanes of Performance Group C in their Certificate of Airworthiness

5. With reference to Article 29(1) of this Order an aeroplane registered in Hong Kong in respect of which there is in force under this Order a certificate of airworthiness in which the aeroplane is designated as being of performance group C shall not fly for the purpose of public transport unless

the weight of the aeroplane at the commencement of the take-off run is such that the following conditions are satisfied—

- (1) That weight does not exceed the maximum take-off weight specified for the altitude and the air temperature at the aerodrome at which the take-off is to be made.
- (2) The take-off run required and the take-off distance required, specified as being appropriate to—
  - (a) the weight of the aeroplane at the commencement of the take-off run;
  - (b) the altitude of the aerodrome;
  - (c) the air temperature at the aerodrome;
  - (d) the average slope of the surface of the aerodrome in the direction of take-off over the emergency distance available; and
  - (e) not more than 50 per cent of the reported wind component opposite to the direction of take-off or not less than 150 per cent of the reported wind component in the direction of take-off, do not exceed the take-off run available and the emergency distance available, respectively, at the aerodrome at which the take-off is to be made.
  - (a) (3) (a) Subject to condition (4) of this Regulation, the net take-off flight path with all power units operating specified as being appropriate to—
    - (i) the weight of the aeroplane at the commencement of the take-off run;
    - (ii) the altitude at the aerodrome;
    - (iii) the air temperature at the aerodrome;
    - (iv) not more than 50 per cent of the reported wind component opposite to the direction of take-off or not less than 150 per cent of the reported wind component in the direction of take-off;

and plotted from a point 50 feet above the end of the take-off distance required at the aerodrome at which the take-off is to be made to a height of 1,500 feet above the aerodrome shows that the aeroplane will clear any obstacle in its path by a vertical interval of not less than 35 feet; and if it is intended that the aeroplane shall change its direction of flight by more than 15° before reading 1500 feet the vertical interval shall be not less than 50 feet while the aircraft is changing direction.

- (b) For the purpose of sub-paragraph (a) hereof an obstacle shall be deemed to be in the path of the aeroplane if the distance from the obstacle to the nearest point on the ground below the intended line of flight of the aeroplane does not exceed 75 metres.
- (c) In assessing the ability of the aeroplane to satisfy this condition, it shall not be assumed to make a change of direction of a radius less than the specified radius of steady turn.
- (a) (4) (a) In the case of an aeroplane which is intended to be flown for any period before reaching a height of 1500 feet above the aerodrome from which the take-off is to be made in conditions which will not ensure that any obstacles can be located by means of visual observation, the net take-off flight path with one power unit inoperative specified as being appropriate to the factors contained in sub-paragraphs (i) to (iv) of condition 3(a) in this Regulation and plotted from the point on the net take-off flight path with all power units operating specified as being appropriate to those factors at which in the meteorological conditions expected for the flight the loss of visual reference would occur, shows that the aeroplane will clear by a vertical interval of not less than 35 feet any obstacle in its path; and if it is intended that the aeroplane shall change its direction of flight by more than 15° the vertical interval shall not be less than 50 feet during the change of direction.

- (b) For the purpose of sub-paragraph (a) hereof an obstacle shall be deemed to be in the path of the aeroplane if the distance from the obstacle to the nearest point on the ground below the intended line of flight of the aeroplane does not exceed—
  - (i) 75 metres plus one eighth of the distance from such point to the end of the emergency distance available measured along the intended line of flight of the aeroplane; or
  - (ii) 900 metres,

whichever is the less.

- (c) In assessing the ability of the aerodrome to satisfy this condition it shall not be assumed to make a change of direction of a radius less than the specified radius of steady turn.
- (5) The aeroplane at any time after it reaches a height of 1,500 feet above the aerodrome from which the take-off is made will, in the meteorological conditions expected for the flight, in the event of any one power unit becoming inoperative at any point on its route or on any planned diversion therefrom, and with the other power unit or power units operating within the specified maximum continuous power conditions, be capable of continuing the flight at altitudes not less than the relevant minimum altitude for safe flight stated in, or calculated from the information contained in, the operations manual relating to the aeroplane to a point 1,500 feet above an aerodrome at which a safe landing can be made and after arrival at that point be capable of maintaining that height:

Provided that in assessing the ability of the aeroplane to satisfy this condition it shall not be assumed to be capable of flying at any point on its route at an altitude exceeding the performance ceiling, with all power units operating, specified as being appropriate to its estimated weight at that point.

- (6) The landing weight of the aeroplane will not exceed the maximum landing weight specified for the altitude and the expected air temperature for the estimated time of landing at the aerodrome at which it is intended to land and at any alternate aerodrome.
- (7) Subject to condition (8) of this Regulation, the distance required by the aeroplane to land from a height of 50 feet otherwise than in accordance with specified data for short field landing does not, at the aerodrome at which it is intended to land and at any alternate areodrome, exceed 70 per cent of the landing distance available on the most suitable runway for a landing in still air conditions, and on the runway that may be required for landing because of the forecast wind conditions; and for the purposes of this condition the distance required to land from a height of 50 feet shall be taken to be that specified as being appropriate to—
  - (a) the landing weight;
  - (b) the altitude at the aerodrome;
  - (c) the temperature in the specified international standard atmosphere appropriate to the altitude at the aerodrome;
  - (d) (i) a level surface in the case of runways usable in both directions;
    - (ii) the average slope of the runway in the case of runways usable in only one direction; and
  - (e) (i) still air conditions in the case of the most suitable runway for landing in still air conditions;
    - (ii) not more than 50 per cent of the forecast wind component opposite to the direction of landing or not less than 150 per cent of the forecast wind component in the direction of landing in the case of the runway that may be required for landing because of the forecast wind conditions.
- (8) As an alternative to condition (7) of this Regulation, the distance required by the aeroplane, with all power units operating and with one power unit inoperative, to land in accordance with specified data for short field landing, does not at the aerodrome of intended destination and at

any alternate aerodrome exceed the landing distance available on the most suitable runway for a landing in still air conditions and on the runway that may be required for landing because of the forecast wind conditions; and for the purpose of this condition the distance required to land from the appropriate heights shall be taken to be that specified as being appropriate to the factors set forth in sub-paragraphs (a) to (e) of condition (7) of this Regulation and the appropriate height shall be—

- (a) for a landing with all power units operating—any height between 30 and 50 feet in Hong Kong and 50 feet elsewhere; and
- (b) for a landing with one power unit inoperative—50 feet in Hong Kong and elsewhere:

#### Provided that—

- (i) if the specified distance required to land with one power unit inoperative from a height of 50 feet at the aerodrome of intended destination exceeds the landing distance available, it shall be sufficient compliance with sub-paragraph (b) of this condition if an alternate aerodrome which has available the specified landing distance required to land with one power unit inoperative from such a height, is designated in the flight plan;
- (ii) the distance required by the aeroplane to land shall be determined in accordance with condition (7) and not in accordance with this condition if it is intended to land at night, or when the cloud ceiling or ground visibility forecast for the estimated time of landing at the aerodrome of intended destination and at any alternate aerodrome at which it is intended to land in accordance with specified data for short field landing with all power units operating are less than 500 feet and one nautical mile respectively.

Weight and Performance of Public Transport Aeroplanes Classified as Aeroplanes of Performance Group D in their Certificate of Airworthiness

- **6.** With reference to Article 29(1) of this Order an aeroplane registered in Hong Kong in respect of which there is in force under this Order a certificate of airworthiness in which the aeroplane is designated as being of performance group D shall not fly for the purpose of public transport at night or when the cloud ceiling or visibility prevailing at the aerodrome of departure and forecast for the estimated time of landing at the aerodrome at which it is intended to land and at any alternate aerodrome are less than 1,000 feet and one nautical mile respectively and shall not fly for the purpose of public transport at any other time unless the weight of the aeroplane at the commencement of the take-off run is such that the following conditions are satisfied—
- (1) That weight does not exceed the maximum take-off weight specified for the altitude and air temperature at the aerodrome at which the take-off is to be made.
- (2) The take-off run required and the take-off distance required specified as being appropriate to—
  - (a) the weight of the aeroplane at the commencement of the take-off run;
  - (b) the altitude at the aerodrome;
  - (c) the air temperature at the aerodrome;
  - (d) the average slope of the surface of the aerodrome in the direction of take-off over the emergency distance available; and
  - (e) not more than 50 per cent of the reported wind component opposite to the direction of take-off or not less than 150 per cent of the reported wind component in the direction of take-off.
  - (a) (3) (a) The net take-off flight path with all power units operating, specified as being appropriate to—
    - (i) the weight of the aeroplane at the commencement of the take-off run;

- (ii) the altitude at the aerodrome;
- (iii) the air temperature at the aerodrome; and
- (iv) not more than 50 per cent of the reported wind component opposite to the direction of take-off or not less than 150 per cent of the reported wind component in the direction of take-off, and plotted from a point 50 feet above the end of the take-off distance required at the aerodrome at which the take-off is to be made to the point at which the aeroplane reaches a height of 1000 feet above the aerodrome shows that the aeroplane will clear any obstacle in its path by a vertical interval of not less than 35 feet except that if it is intended that the aeroplane shall change its direction of flight by more than 15° before reaching 1000 feet the verticial interval shall be not less than 50 feet while the aircraft is changing direction.
- (b) For the purpose of sub-paragraph (a) hereof an obstacle shall be deemed to be in the path of the aeroplane if the distance from the obstacle to the nearest point on the ground below the intended line of flight of the aeroplane does not exceed 75 metres.
- (c) In assessing the ability of the aeroplane to satisfy this condition it shall not be assumed to make a change of direction of a radius less than the specified radius of steady turn.
- (4) The aeroplane, at any time after it reaches a height of 1,000 feet above the aerodrome from which take-off is to be made, will, in the meteorological conditions expected for the flight, in the event of any one power unit becoming inoperative at any point on its route or on any planned diversion therefrom, and with the other power unit or power units, if any, operating within the maximum specified continuous power conditions, be capable of continuing the flight at altitudes not less than the relevant minimum altitudes for safe flight stated in, or calculated from the information contained in, the operations manual relating to the aeroplane to a point 1,000 feet above a place at which a safe landing can be made:

Provided that in assessing the ability of the aeroplane to satisfy this condition it shall not be assumed to be capable of flying at any point on its route at an altitude exceeding the performance ceiling with all power units operating specified as being appropriate to its estimated weight at that point.

- (5) The landing weight of the aeroplane will not exceed the maximum landing weight specified for the altitude and the expected air temperature for the estimated time of landing at the aerodrome at which it is intended to land and at any alternate aerodrome.
- (6) The distance required by the aeroplane to land from a height of 50 feet does not, at the aerodrome at which it is intended to land and at any alternate aerodrome, exceed 70 per cent of the landing distance available on the most suitable runway for a landing in still air conditions, and on the runway that may be required for landing because of the forecast wind conditions; and for the purposes of a runway that may be required for this condition the distance required to land from a height of 50 feet shall be taken to be that specified as being appropriate to—
  - (a) the landing weight;
  - (b) the altitude at the aerodrome;
  - (c) the temperature in the specified international standard atmosphere appropriate to the altitude at the aerodrome;
  - (d) (i) a level surface in the case of runways usable in both directions;
    - (ii) the average slope of the runway in the case of runways usable in only one direction; and
  - (e) (i) still air conditions in the case of the most suitable runway for a landing in still air conditions;

(ii) not more than 50 per cent of the forecast wind component opposite to the direction of landing or not less than 150 per cent of the forecast wind component in the direction of landing in the case of the runway that may be required for landing because of the forecast wind conditions.

Weight and Performance of Public Transport Aeroplanes classified as Aeroplanes of Performance Group E in their Certificates of Airworthiness

- 7.—(1) With reference to Article 29(1) of this Order an aeroplane registered in Hong Kong in respect of which there is in force under this Order a certificate of airworthiness in which the aeroplane is designated as being of performance group E shall not fly for the purpose of public transport unless the weight of the aeroplane at the commencement of the take-off run is such that the following conditions are satisfied—
  - (a) that weight for the altitude and the air temperature at the aerodrome at which the take-off is to be made does not exceed the maximum take-off weight specified as being appropriate to—
    - (i) the weight at which the aeroplane is capable in the en-route configuration and with all power units operating within the specified maximum continuous power conditions of a rate of climb of 700 feet per minute if it has retractable landing gear and of 500 feet per minute if it has fixed landing gear; and
    - (ii) the weight at which the aeroplane is capable, in the en-route configuration and if it is necessary for it to be flown solely by reference to instruments for any period before reaching the minimum altitude for safe flight on the first stage of the route to be flown, stated in, or calculated from the information contained in, the operations manual relating to the aeroplane and, with one power unit inoperative, of a rate of climb of 150 feet per minute.
  - (b) The distance required by the aeroplane to attain a height of 50 feet, with all power units operating within the maximum take-off power conditions specified, when multiplied by a factor of 1.33 does not exceed the emergency distance available at the aerodrome at which the take-off is to be made. The distance required by the aeroplane to attain a height of 50 feet shall be that appropriate to—
    - (i) the weight of the aeroplane at the commencement of the take-off run;
    - (ii) the altitude at the aerodrome;
    - (iii) the air temperature at the aerodrome; and
    - (iv) not more than 50 per cent of the reported wind component opposite to the direction of take-off or not less than 150 per cent of the reported wind component in the direction of take-off.
  - (c) The aeroplane will, in the meteorological conditions expected for the flight, in the event of any one power unit becoming inoperative at any point on its route or on any planned diversion therefrom, and with the other power unit or power units, if any, operating within the specified maximum continuous power conditions, be capable of continuing the flight at altitudes not less than the relevant minimum altitude for safe flight stated in, or calculated from the information contained in, the operations manual to a point 1000 feet above a place at which a safe landing can be made:

Provided that in assessing the ability of the aeroplane to satisfy this condition it shall not be assumed to be capable of flying at any point on its route or on any planned diversion therefrom at an altitude exceeding that at which it is capable of a rate of climb with all power units operating within the maximum continuous power conditions specified of 150 feet per minute and if it is necessary for it to be flown

solely by reference to instuments, be capable with one power unit inoperative, of a rate of climb of 100 feet per minute.

- (d) The landing weight of the aeroplane for the altitude and the expected air temperature for the estimated time of landing at the aerodrome at which it is intended to land and at any alternate aerodrome will not exceed the maximum landing weight specified—
  - (i) at which the aeroplane is capable, in the en-route configuration and with all power units operating within the specified maximum continuous power conditions of a rate of climb of 700 feet per minute if it has retractable landing gear and of 500 feet per minute if it has fixed landing gear; and
  - (ii) at which the aeroplane is capable in the en-route configuration and if it is necessary for it to be flown solely by reference to instruments for any period after leaving the minimum altitude for safe flight on the last stage of the route to be flown, stated in, or calculated from the information contained in, the operations manual relating to the aeroplane and with one power unit inoperative, of a rate of climb of 150 feet per minute.
- (2) An aeroplane designated as aforesaid as an aeroplane of perfomance group E shall not fly for the purpose of public transport at night or when the cloud ceiling or visibility prevailing at the aerodrome of departure and forecast for the estimated time of landing at the aerodrome at which it is intended to land and at any alternate aerodrome are less than 1000 feet and one nautical mile respectively:

Provided that the foregoing prohibition shall not apply if the aeroplane is capable, in the enroute configuration and with one power unit inoperative, of a rate of climb of 150 feet per minute.

Weight and Performance of Public Transport Aeroplanes classified as Aeroplanes of Performance Group X in their Certificates of Airworthiness

- **8.** With reference to Article 29(1) of this Order an aeroplane in respect of which there is in force under this Order a certificate of airworthiness designating the aeroplane as being of performance group X shall not fly for the purpose of public transport unless the weight of the aeroplane at the commencement of the take-off run is such that the following conditions are satisfied:
  - (i) (1) That weight does not exceed the maximum take-off weight specified for the altitude at the aerodrome at which the take-off is to be made, or for the altitude and the air temperature at such aerodrome, as the case may be.
  - (ii) The minimum effective take-off runway length required specified as being appropriate to—
    - (a) the weight of the aeroplane at the commencement of the take-off run;
    - (b) the altitude at the aerodrome;
    - (c) the air temperature at the time of take-off;
    - (d) the condition of the surface of the runway from which the take-off will be made;
    - (e) the overall slope of the take-off run available; and
    - (f) not more than 50 per cent of the reported wind component opposite to the direction of take-off or not less than 150 per cent of the reported wind component in the direction of take-off,

does not exceed the take-off run available at the aerodrome at which the take-off is to be made.

(iii) (a) The take-off flight path with one power unit inoperative, specified as being appropriate to—

- (aa) the weight of the aeroplane at the commencement of the take-off run;
- (bb) the altitude at the aerodrome; and
- (cc) not more than 50 per cent of the reported wind component opposite to the direction of take-off or not less than 150 per cent of the reported wind component in the direction of take-off,

and plotted from a point 50 feet above the end of the minimum effective take-off runway length required at the aerodrome at which the take-off is to be made, shows that the aeroplane will thereafter clear any obstacle in its path by a vertical interval of not less than the greater of 50 feet or 35 feet plus one-hundredth of the distance from the point on the ground below the intended line of flight of the aeroplane nearest to the obstacle to the end of the take-off distance available, measured along the intended line of flight of the aeroplane.

- (b) For the purpose of sub-paragraph (a) an obstacle shall be deemed to be in the path of the aeroplane if the distance from the obstacle to the nearest point on the ground below the intended line of flight does not exceed—
  - (aa) a distance of 60 metres plus half the wing span of the aeroplane plus oneeighth of the distance from such point to the end of the take-off distance available measured along the intended line or flight; or
  - (bb) 900 metres,

whichever is the less.

- (c) In assessing the ability of the aeroplane to satisfy this condition, insofar as it relates to flight path, it shall not be assumed to make a change of direction of a radius less than the radius of steady turn corresponding to an angle of bank of 15°.
- (i) (a) Subject to sub-paragraph (b), the weight of the aeroplane at any point on the route or any planned diversion therefrom, having regard to the fuel and oil expected to be consumed up to that point, shall be such that the aeroplane with one power unit inoperative and the other power unit or units operating within the maximum continuous power conditions specified, will be capable of a rate of climb of at least K(Vso/100)2 feet per minute at an altitude not less than the minimum altitude for safe flight stated in or calculated from the information contained in the operations manual where Vso is in knots and K has the value of 797-1060/N, N being the number of power units installed.
  - (b) As an alternative to (a) the aeroplane may be flown at an altitude from which, in the event of failure of one power unit, it is capable of reaching an aerodrome where a landing can be made in accordance with condition (3)(ii) in this Regulation relating to an alternate aerodrome. In that case the weight of the aeroplane shall be such that, with the remaining power unit or units operating within the maximum continuous power conditions specified, it is capable of maintaining a minimum altitude on the route to such aerodrome of 2000 feet above all obstacles within 10 nautical miles on either side of the intended track:

Provided that where the operator of the aeroplane is satisfied, taking into account the navigation aids which can be made use of by the aeroplane on the route that the commander of the aeroplane will be able to maintain his intended track on that route within a margin of 5 nautical miles, the foregoing provisions of this sub-paragraph shall have effect as if 5 nautical miles were substituted therein for 10 nautical miles and

- (aa) the rate of climb, specified for the appropriate weight and altitude, used in calculating the flight path shall be reduced by an amount equal to K(Vso/100)2 feet per minute;
- (bb) the aeroplane shall comply with the climb requirements of condition (2) (i)(a) at 1000 feet above the chosen aerodrome;
- (cc) account shall be taken of the effect of wind and temperature on the flight path; and
- (dd) the weight of the aeroplane may be assumed to be progressively reduced by normal consumption of fuel and oil.
- (ii) An aeroplane having four power units shall, if any two power units become inoperative at any point along the route or any planned diversion therefrom, being a point more than 90 minutes flying time (assuming all power units to be operating) from the nearest aerodrome at which a landing can be made in compliance with condition (3)(ii) of this Regulation relating to an alternate aerodrome be capable of continuing the flight at an altitude of not less than 1000 feet above ground level to a point above that aerodrome. In assessing the ability of the aeroplane to satisfy this condition, it shall be assumed that the remaining power units will operate within the specified maximum continuous power conditions, and account shall be taken of the temperature and wind conditions expected for the flight.
- (i) (3) (i) The landing weight of the aeroplane will not exceed the maximum landing weight specified for the altitude at the aerodrome at which it is intended to land and at any alternate aerodrome.
- (ii) The required landing runway lengths respectively specified as being appropriate to the aerodromes of intended destination and the alternate aerodromes do not exceed at the aerodrome at which it is intended to land or at any alternate aerodrome, as the case may be, the landing distance available on—
  - (a) the most suitable runway for landing in still air conditions; and
  - (b) the runway that may be required for landing because of the forecast wind conditions, the required landing runway lengths being taken to be those specified as being appropriate to—
    - (aa) the landing weight;
    - (bb) the altitude at the aerodrome;
    - (cc) still air conditions in the case of the most suitable runway for a landing in still air conditions; and
    - (dd) not more than 50 per cent of the forecast wind component opposite to the direction of landing or not less then 150 per cent of the forecast wind component in the direction of landing in the case of the runway that may be required for landing because of the forecast wind conditions.

Weight and Performance of Public Transport Helicopters classified as Helicopters of Performance Group A in their Certificate of Airworthiness

- **9.** With reference to Article 29(1) of this Order a helicopter registered in Hong Kong in respect of which there is in force under the Order a Certificate of Airworthiness in which the helicopter is designated as being of performance Group A shall not fly for the purpose of public transport unless the weight of the helicopter at the commencement of take-off is such that the following conditions are satisfied:
- (1) The weight does not exceed the maximum take-off weight specified for the altitude and the air temperature at the site from which the take-off is to be made.

(2) The landing weight of the helicopter will not exceed the maximum landing weight specified for the altitude and the expected air temperature for the estimated time of landing at the site at which it is intended to land and at any alternate site.

Weight and Performance of Public Transport Helicopters classified as Helicopters of Performance Group A (Restricted) in their Certificate of Airworthiness

- 10. With reference to Article 29(1), a helicopter registered in Hong Kong in respect of which there is in force under the Order a certificate of airworthiness in which the helicopter is designated as being of performance group A (restricted) shall not fly for the purpose of public transport when the cloud ceiling or visibility prevailing at the departure site and forecast for the estimated time of landing at the site at which it is intended to land and at any alternate site are less than 500 feet and 1000 metres respectively and shall not fly for the purpose of public transport at any other time unless the weight of the helicopter at the commencement of take off is such that the following conditions are satisfied:
- (1) The weight does not exceed the maximum take-off weight specified for the altitude and the air temperature at the site from which the take-off is to be made.
- (2) The landing weight of the helicopter will not exceed the maximum landing weight specified for the altitude and the expected air temperature for the estimated time of landing at the site at which it is intended to land and at any alternate site.

Weight and Performance of Public Transport Helicopters classified as Helicopters of Performance Group B in their Certificate of Airworthiness

- 11. With reference to Article 29(1) of this Order a helicopter registered in Hong Kong in respect of which there is in force under this Order a Certificate of Airworthiness in which the helicopter is designated as being of performance Group B shall not fly for the purpose of public transport at night or out of sight of the surface or when the cloud ceiling or visibility prevailing at the departure site and forecast for the estimated time of landing at the site at which it is intended to land are less than 600 feet and 1,000 metres respectively and shall not fly for the purpose of public transport at any other time unless the weight of the helicopter at the commencement of take-off is such that the following conditions are satisfied:
- (1) The weight does not exceed the maximum take-off weight specified for the altitude and the air temperature at the site at which the take-off is to be made.
- (2) The landing weight of the helicopter will not exceed the maximum landing weight specified for the altitude and the expected air temperature for the estimated time of landing at the site at which it is intended to land and at any alternate site.

Noise and Vibration caused by Aircraft on Aerodromes

- 12. With reference to Article 78 of this Order, the conditions under which noise and vibration may be caused by aircraft (including military aircraft) on Government aerodromes, licensed aerodromes or on aerodromes at which the manufacture, repair or maintenance of aircraft is carried out by persons carrying on business as manufacturers or repairers of aircraft, shall be as follows, that is to say, that, whether in the course of the manufacture of the aircraft or otherwise—
  - (a) the aircraft is taking off or landing; or
  - (b) the aircraft is moving on the ground or water; or
  - (c) the engines are being operated in the aircraft—
    - (i) for the purpose of ensuring their satisfactory performance;

- (ii) for the purpose of bringing them to a proper temperature in preparation for, or at the end of, a flight; or
- (iii) for the purpose of ensuring that the instruments, accessories or other components of the aircraft are in a satisfactory condition.

Certificates of Maintenance Review and Release to Service issue by Maintenance Engineers licensed by Prescribed Countries

13. With reference to Article 9(3)(a)(iii) and Article 11(6)(a)(iii) of the Order the following country is hereby prescribed—

United Kingdom

Aeroplanes Flying for the Purpose of Public Transport of Passengers—Aerodrome Facilities for Approach to Landing and Landing

- **14.**—(1) This Regulation shall apply to every aeroplane registered in Hong Kong engaging on a flight for the purpose of the public transport of passengers on a scheduled journey and to every aeroplane so registered whose maximum total weight authorised exceeds 5700 kg engaging on such a flight otherwise than on a scheduled journey.
- (2) For the purposes of Article 27(1)(c) of this Order, the following manning and equipment are prescribed in relation to aerodromes intended to be used for landing or as an alternate aerodrome by aircraft to which this Regulation applies—
  - (a) air traffic control service or aerodrome flight information service, including the reporting to aircraft of the current meteorological conditions at the aerodrome;
  - (b) very high frequency radiotelephony;
  - (c) at least one of the following radio navigation aids, either at the aerodrome or elsewhere, and in either case for the purpose of assisting the pilot in locating the aerodrome and making an approach to landing there—
    - (i) radio direction finding equipment utilising emissions in the very high frequency bands;
    - (ii) a non-directional radio beacon transmitting signals in the low or medium frequency bands;
    - (iii) very high frequency omni-directional radio range;
    - (iv) radar equipment.

It shall be sufficient if the equipment specified in sub-paragraph (c) is provided, even if for the time being it is not in operation.

- (3) An aircraft to which this Regulation applies shall not land or make an approach to landing at any aerodrome unless services and equipment according with paragraph (2) of this Regulation are provided and are in operation at that aerodrome, and can be made use of by that aircraft, and, in the case of the navigation aids specified in sub-paragraph (c), items (i) to (iv), instructions and procedures for the use of the aid are included in the operations manual. A person shall be deemed not to have contravened the provisions of this paragraph if he proves that—
  - (a) for the time being use could not be made of the radio navigation aids provided under paragraph (2)(c) whether by reason of those aids not being in operation or of the unserviceability of equipment in the aircraft itself; and
  - (b) the approach to landing was made in accordance with intructions and procedures appropriate to that circumstance and included in the operations manual.

(4) An aircraft to which this Regulation applies shall be equipped with the equipment necessary to enable use to be made of at least one of the navigation aids specified in paragraph (2)(c) of this Regulation and in use for landing at the aerodrome. Nothing in this paragraph shall require the duplication of any equipment carried in pursuance of any other provision of this Order of any regulation made thereunder.

Pilot Maintenance—Prescribed Repair or Replacements

- **15.** With reference to Article 11(3) of this Order the following repairs or replacements are hereby prescribed—
- (1) Repairs to upholstery and decorative furnishing of the cabin or cockpit interior when repair does not require dismantling of any structure or operating system or interfere with an operating system or affect the structure of the aircraft;
- (2) Replacement of seats or seat parts not involving dismantling of any structure or of any operating system.

Mandatory Reporting—Prescribed Reportable Occurrences, Time and Manner of Reporting and Information to be reported

- **16.**—(1) With reference to Article 86(1) of this Order, the following reportable occurrences are hereby prescribed, that is to say those—
  - (a) involving damage to an aircraft;
  - (b) involving injury to a person;
  - (c) involving the impairment during a flight of the capacity of a member of the flight crew of an aircraft to undertake the functions to which his licence relates;
  - (d) involving the use in flight of any procedures taken for the purpose of overcoming an emergency;
  - (e) involving the failure of an aircraft system or of any equipment of an aircraft;
  - (f) arising from the control of an aircraft in flight by its flight crew;
  - (g) arising from failure or inadequacy of facilities or services on the ground used or intended to be used for purposes of or in connection with the operation of aircraft;
- (h) arising from the loading or the carriage of passengers, cargo (including mail) or fuel; and those which are not referred to in sub-paragraphs (a) to (h) of this paragraph of this Regulation but which, in the opinion of a person referred to in sub-paragraphs (a) to (e) of Article 86(1) of this Order, constitute an occurrence endangering, or which if not corrected would endanger, the safety of an aircraft, its occupants or any other person.
- (2) For the purposes of this Regulation, an aircraft system includes the flight control, power plant, fuel, hydraulic, pneumatic, pressurisation, electrical, navigation and any other system of the aircraft.
- (3) With reference to Article 86(1) of this Order, it is hereby prescribed that a report containing the information referred to in paragraph (4) of this Regulation shall be despatched in writing and by the quickest available means to the Governor within 96 hours of the reportable occurrence coming to the knowledge of the person making the report:

Provided that, if at that time any of the said information is not in the possession of that person, he shall despatch that information to the Governor in writing and by the quickest available means with 96 hours of it coming into his possession.

- (4) With reference to Article 86(1) of this Order, a report shall, as far as possible, contain the following information:
  - (a) the type, series and registration marks of the aircraft concerned;

- (b) the name of the operator of the aircraft;
- (c) the date of the reportable occurrence;
- (d) if the person making the report has instituted an investigation into the reportable occurrence, whether or not this has been completed;
- (e) a description of the reportable occurrence, including its effects and any other relevant information;
- (f) in the case of a reportable occurrence which occurs during flight—
  - (i) the Greenwich Mean Time of the occurrence;
  - (ii) the last point of departure and the next point of intended landing of the aircraft at that time;
  - (iii) the geographical position of the aircraft at that time;
- (g) in the case of a defect in or malfunctioning of an aircraft or any part or equipment of an aircraft, the name of the manufacturer of the aircraft, part or equipment, as the case may be, and, where appropriate, the part number and modification standard of the part or equipment and its location on the aircraft;
- (h) the signature and name in block capitals of the person making the report, the name of his employer and the capacity in which he acts for that employer;
- (i) in the case of a report made by the commander of an aircraft or a person referred to in subparagraph (c) or (d) of Article 86(1) of this Order the address or telephone number at which communications should be made to him, if different from that of his place of employment.

Minimum Navigation Performance Specifications—Prescribed Airspace and Navigation Performance Capability

- 17.—(1) With reference to Article 36 of this Order the following navigation performance capability is hereby prescribed, that is to say, a capability to ensure that—
  - (a) the standard deviation of lateral errors in the track of the aircraft is not more than 6.3 nautical miles; and
  - (b) the proportion of the flight time of the aircraft during which the actual track of the aircraft is 30 nautical miles or more off the track along which it has been given an air traffic control clearance to fly is less than 5.3x10-4; and
  - (c) the proportion of the flight time of the aircraft during which the actual track of the aircraft is between 50 and 70 nautical miles off the track along which it has been given an air traffic control clearance to fly is less than 13x10-5.
- (2) For the purposes of Article 36 of this Order the following airspace is hereby prescribed, that is to say, the airspace from flight level 275 to flight level 400 within the area defined by rhumb lines joining successively the following points—

34°10'N 17°48'W	65°00'N 60°00'W
36°30'N 15°00'W	64°00'N 63°00'W
42°00'N 15°00'W	61°00'N 63°00'W
43°00'N 13°00'W	57°00'N 59°00'W
45°00'N 13°00'W	53°00'N 54°00'W
45°00'N 08°00'W	49°00'N 51°00'W
51°00'N 08°00'W	45°00'N 51°00'W

51°00'N 15°00'W	45°00'N 53°00'W
54°00'N 15°00'W	43°36'N 60°00'W
54°34'N 10°00'W	41°52'N 67°00'W
61°00'N 10°00'W	39°00'N 67°00'W
61°00'N 00°00'	38°35'N 68°53'W
82°00'N 00°00'	38°30'N 69°15'W
82°00'N 30°00'E	38°30'N 60°00'W
North Pole	27°00'N 60°00'W
82°00'N 60°00'W	27°00'N 25°00'W
78°00'N 75°00'W	30°00'N 25°00'W
76°00'N 76°00'W	30°00'N 20°00'W
65°00'N 76°45'W	31°39'N 17°25'W

thence by that part of the arc of a circle radius 100 nautical miles centred on 33°04'N 16°21'W to 34°10'N 17°48'W

Regulation 3

## **ANNEX TO SCHEDULE 15**

# WEIGHT AND PERFORMANCE OF PUBLIC TRANSPORT AEROPLANES HAVING NO PERFORMANCE GROUP CLASSIFICATION IN THEIR CERTIFICATE OF AIRWORTHINESS

Conditions (1) and (2) apply to all aeroplanes to which Regulation 3 applies;

Conditions (3) to (10) apply to all aeroplanes to which Regulation 3 applies—

- (i) of which the specified maximum total weight authorised exceeds 5700 kg, or
- (ii) of which the specified maximum total weight authorised does not exceed 5700 kg and which comply with neither condition (1)(a) nor condition (1)(b);

Conditions (11) to (18) inclusive apply to all aeroplanes to which Regulation 3 applies of which the specified maximum total weight authorised does not exceed 5700 kg and which comply with condition (1)(a) or condition (1)(b) or with both those conditions.

## All aeroplanes

- (1) Either—
  - (a) the wing loading of the aeroplane does not exceed 20 lb per square foot; or
  - (b) the stalling speed of the aeroplane in the landing configuration does not exceed 60 knots; or
  - (c) the aeroplane, with any one of its power units inoperative and the remaining power unit or units operating within the maximum continuous power conditions specified, is capable of a gradient of climb of at least 1 in 200 at an altitude of 5000 feet in the specified international standard atmosphere.
- (2) The weight of the aeroplane at the commencement of the take-off run does not exceed the maximum take-off weight, if any, specified for the altitude and the air temperature at the aerodrome at which the take-off is to be made.

Aeroplanes of a specified maximum total weight authorised exceeding 5700 kg and aeroplanes of a specified maximum total weight authorised not exceeding 5700 kg which comply with neither condition (1)(a) nor condition (1)(b).

- (a) (3) (a) The distance required by the aeroplane to attain a height of 50 feet, with all power units operating within the maximum take-off power conditions specified, does not exceed the take-off run available at the aerodrome at which the take-off is to be made.
- (b) The distance required by the aeroplane to attain a height of 50 feet with all power units operating within the maximum take-off power conditions specified, when multiplied by a factor of either 1.33 for aeroplanes having two power units or by a factor of 1.18 for aeroplanes having four power units, does not exceed the emergency distance available at the aerodrome at which the take-off is to be made.
- (c) For the purposes of sub-paragraphs (a) and (b) the distance required by the aeroplane to attain a height of 50 feet shall be that appropriate to—
  - (i) the weight of the aeroplane at the commencement of the take-off run;
  - (ii) the altitude at the aerodrome;
  - (iii) the air temperature at the aerodrome;
  - (iv) the condition of the surface of the runway from which the take-off will be made;
  - (v) the slope of the surface of the aerodrome in the direction of take-off over the take-off run available and the emergency distance available, respectively; and
  - (vi) not more than 50 per cent of the reported wind component opposite to the direction of take-off or not less than 150 per cent of the reported wind component in the direction of take-off.
- (a) (4) (a) The take-off flight path with one power unit inoperative and the remaining power unit or units operating within the maximum take-off power conditions specified, appropriate to—
  - (i) the weight of the aeroplane at the commencement of the take-off run;
  - (ii) the altitude at the aerodrome;
  - (iii) the air temperature at the aerodrome;
  - (iv) not more than 50 per cent of the reported wind component opposite to the direction of take-off or not less than 150 per cent of the reported wind component in the direction of take-off,

and plotted from a point 50 feet above the end of the appropriate factored distance required for take-off under condition (3)(b) of this Annex at the aerodrome at which the take-off is to be made, shows that the aeroplane will clear any obstacle in its path by a vertical interval of at least 35 feet except that if it is intended that an aeroplane shall change its direction by more than 15° the vertical interval shall be not less than 50 feet during the change of direction.

- (b) For the purpose of sub-paragraph (4)(a) an obstacle shall be deemed to be in the path of the aeroplane if the distance from the obstacle to the nearest point on the ground below the intended line of flight does not exceed—
  - (i) a distance of 60 metres plus half the wing span of the aeroplane, plus one-eighth of the distance from such point to the end of the take-off distance available, measured along the intended line of flight; or
  - (ii) 900 metres

whichever is the less

- (c) In assessing the ability of the aeroplane to satisfy this condition, it shall not be assumed to make a change of direction of a radius less than a radius of steady turn corresponding to an angle of bank of 15°.
- (5) The aeroplane will, in the meteorological conditions expected for the flight, in the event of any one power unit becoming inoperative at any point on its route or on any planned diversion therefrom and with the other power unit or units operating within the maximum continuous power conditions specified, be capable of continuing the flight clearing obstacles within 10 nautical miles either side of the intended track by a vertical interval of at least:
  - (a) 1,000 feet when the gradient of the flight path is not less than zero; or
  - (b) 2,000 feet when the gradient of the flight path is less than zero,

to an aerodrome at which it can comply with condition (9), and on arrival over such aerodrome the flight path shall have a gradient of not less than zero at 1,500 feet above the aerodrome.

For the purpose of this condition the gradient of climb of the aeroplane shall be taken to be one per cent less than that specified.

- (6) The aeroplane will, in the meteorological conditions expected for the flight, at any point on its route or on any planned diversion therefrom, be capable of climbing at a gradient of at least 1 in 50, with all power units operating within the maximum continuous power conditions, specified at the following altitudes—
  - (a) the minimum altitudes for safe flight on each stage of the route to be flown or of any planned diversion therefrom specified in, or calculated from the information contained in, the operations manual relating to the aeroplane; and
  - (b) the minimum altitudes necessary for compliance with conditions (5) and (7), as appropriate.
- (7) If, on the route to be flown or any planned diversion therefrom, the aeroplane will be engaged in a flight over water during which at any point it may be more than 90 minutes flying time in still air from the nearest shore, it will in the event of two power units becoming inoperative during such time and with the other power unit or units operating within the maximum continuous power conditions specified be capable of continuing the flight having regard to the meteorological conditions expected for the flight, clearing all obstacles within 10 nautical miles either side of the intended track by a vertical interval of at least 1,000 feet, to an aerodrome at which a safe landing can be made.
- (8) The landing weight of the aeroplane will not exceed the maximum landing weight, if any, specified for the altitude and the expected air temperature for the estimated time of landing at the aerodrome at which it is intended to land and at any alternate aerodrome.
- (9) The distance required by the aeroplane to land from a height of 50 feet does not, at the aerodrome at which it is intended to land, exceed 60 per cent of the landing distance available on—
  - (i) the most suitable runway for a landing in still air conditions; and
  - (ii) the runway that may be required for landing because of the forecast wind conditions; provided that if an alternative aerodrome is designated in the flight plan the landing distance required at the aerodrome at which it is intended to land shall not exceed 70 per cent of that available on the runway.

The distance required to land from a height of 50 feet shall be taken to be that appropriate to—

- (a) the landing weight;
- (b) the altitude at the aerodrome;
- (c) the temperature in the specified international standard atmosphere appropriate to the altitude at the aerodrome;
- (d) (i) a level surface in the case of runways usable in both directions;

- (ii) the average slope of the runway in the case of runways usable in only one direction;and
- (e) (i) still air conditions in the case of the most suitable runway for a landing in still air conditions; and
  - (ii) not more than 50 per cent of the forecast wind component opposite to the direction of landing or not less than 150 per cent of the forecast wind component in the direction of landing in the case of the runway that may be required for landing because of the forecast wind conditions.
- (10) The distance required by the aeroplane to land from a height of 50 feet does not, at any alternate aerodrome, exceed 70 per cent of the landing distance available on—
  - (i) the most suitable runway for a landing in still air conditions; and
  - (ii) the runway that may be required for landing because of the forecast wind conditions.

For the purpose of these conditions the distance required to land from a height of 50 feet shall be determined in the manner provided in condition (9).

Aeroplanes of a specified maximum total weight authorised not exceeding 5,700 kg and which comply with either condition (1)(a) or condition (1)(b), or with both these conditions.

- (11) If the aeroplane is engaged in a flight at night or when the cloud ceiling or visibility prevailing at the aerodrome of departure and forecast for the estimated time of landing at the aerodrome of destination or at any alternate aerodrome are less than 1,000 feet and one nautical mile respectively, it will, with any one of its power units inoperative and the remaining power unit or units operating within the maximum continuous power conditions specified, be capable of climbing at a gradient of at least 1 in 200 at an altitude of 2,500 feet in the specified international standard atmosphere.
  - (a) (12) (a) The distance required by the aeroplane to attain a height of 50 feet, with all power units operating within the maximum take-off power conditions specified, does not exceed the take-off run available at the aerodrome at which the take-off is to be made;
  - (b) The distance required by the aeroplane to attain a height of 50 feet, with all power units operating within the maximum take-off power conditions specified, when multiplied by a factor of 1.33 does not exceed the emergency distance available at the aerodrome at which the take-off is to be made;
  - (c) For the purposes of sub-paragraphs (a) and (b) the distance required by the aeroplane to attain a height of 50 feet shall be that appropriate to—
    - (i) the weight of the aeroplane at the commencement of the take-off run;
    - (ii) the altitude at the aerodrome;
    - (iii) the temperature in the specified international standard atmosphere appropriate to the altitude at the aerodrome or, if greater, the air temperature at the aerodrome less 15° centigrade;
    - (iv) the slope of the surface of the aerodrome in the direction of take-off over the take-off run available and the emergency distance available respectively; and
    - (v) not more than 50 per cent of the reported wind component opposite to the direction of take-off or not less than 150 per cent of the reported wind component in the direction of take-off.
- (13) The take-off flight path, with all power units operating within the maximum take-off power conditions specified, appropriate to—
  - (i) the weight of the aeroplane at the commencement of the take-off run;
  - (ii) the altitude at the aerodrome;

- (iii) the temperature in the specified international standard atmosphere appropriate to the altitude at the aerodrome, or, if greater, the air temperature at the aerodrome less 15° centigrade; and
- (iv) not more than 50 per cent of the reported wind component opposite to the direction of take-off or not less than 150 per cent of the reported wind component in the direction of take-off, and plotted from a point 50 feet above the end of the factored distance required for take-off under condition (12)(b), at the aerodrome at which the take-off is to be made, shows that the aeroplane will clear any obstacle lying within 60 metres plus half the wing span of the aeroplane on either side of its path by a vertical interval of at least 35 feet. In assessing the ability of the aeroplane to satisfy this condition it shall not be asssumed to make a change of direction of a radius less than a radius of steady turn corresponding to an angle of bank of 15°.
- (14) The aeroplane will, in the meteorological conditions expected for the flight, in the event of any one power unit becoming inoperative at any point on its route or on any planned diversion therefrom and with the other power unit or units, if any, operating within the maximum continuous power conditions specified, be capable of continuing the flight so as to reach a point above a place at which a safe landing can be made at a suitable height for such landing.
- (15) The aeroplane will, in the meteorological conditions expected for the flight, at any point on its route or any planned diversion therefrom, be capable of climbing at a gradient of at least 1 in 50, with all power units operating within the maximum continuous power conditions specified at the following altitudes—
  - (a) the minimum altitudes for safe flight on each stage of the route to be flown or on any planned diversion therefrom specified in, or calculated from, the information contained in the operations manual relating to the aeroplane; and
  - (b) the minimum altitudes necessary for compliance with condition (14).
- (16) If on the route to be flown or any planned diversion therefrom the aeroplane will be engaged in a flight over water during which at any point it may be more than 30 minutes flying time in still air from the nearest shore, it will, in the event of one power unit becoming inoperative during such time and with the other power unit or units operating within the maximum continuous power conditions specified, be capable of climbing at a gradient of at least 1 in 200 at an altitude of 5,000 feet in the specified international standard atmosphere.
- (17) The landing weight of the aeroplane will not exceed the maximum landing weight, if any, specified for the altitude and the expected air temperature for the estimated time of landing at the aerodrome at which it is intended to land and at any alternate aerodrome.
- (18) The distance required by the aeroplane to land from a height of 50 feet does not at the aerodrome at which it is intended to land and at any alternate aerodrome exceed 70 per cent, or, if a visual approach and landing will be possible in the meteorological conditions forecast for the estimated time of landing, 80 per cent of the landing distance available on—
  - (i) the most suitable runway for a landing in still air conditions; and
  - (ii) the runway that may be required for landing because of the forecast wind conditions.

The distance required to land from a height of 50 feet shall be taken to be that appropriate to—

- (a) the landing weight;
- (b) the altitude at the aerodrome;
- (c) the temperature in the specified international standard atmosphere appropriate to the altitude at the aerodrome;
- (d) (i) a level surface in the case of runways usable in both directions;

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- (ii) the average slope of the runway in the case of runways usable in only one direction;and
- (e) (i) still air conditions in the case of the most suitable runway for a landing in still air conditions:
  - (ii) not more than 50 per cent of the forecast wind component opposite to the direction of landing or not less than 150 per cent of the forecast wind component in the direction of landing in the case of the runway that may be required for landing because of the forecast wind conditions.

#### SCHEDULE 16

Article 44

## THE AIR NAVIGATION (DANGEROUS GOODS) REGULATIONS

#### Citation

1. These Regulations may be cited as the Air Navigation (Dangerous Goods) Regulations.

#### Interpretation

2

## (1) In these Regulations:—

"consignment" means one or more packages of dangerous goods accepted by an operator from one shipper at one time and at one address receipted for in one lot and moving to one consignee at one destination address:

"dangerous goods" means any article or substance which is capable of posing significant risk to health, safety or property when carried by air and which is classified in Part 2 of the Technical Instructions;

"dangerous goods transport document" means a document, not being an air waybill, which is required by Regulation 4 of these Regulations to accompany a consignment of dangerous goods;

"package" means the packaging and the articles and substances contained therein including one or more packages which have been consolidated by one shipper into one container or enclosure for convenience in handling;

"packing" means the art and operation whereby articles and substances are wrapped up, enclosed in containers or otherwise secured, and "packed" shall be construed accordingly;

"Technical Instructions" means the 1995–96 English language edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air approved and published by decision of the Council of the International Civil Aviation Organisation;

"unit load device" means any type of freight container including any container designed for loading on an aircraft.

(2) For the avoidance of doubt, any instructions or limitations contained in the Technical Instructions for the carriage of dangerous goods on passenger or cargo aircraft, as therein defined, shall for the purpose of these Regulations be interpreted as applying also to the carriage of such goods beneath passenger or cargo aircraft respectively.

## Carriage of dangerous goods

- **3.**—(1) An aircraft shall not carry or have loaded therein or suspended thereunder any dangerous goods, unless such goods are carried, loaded or suspended;
  - (a) with the written permission of the Governor and in accordance with any conditions to which such permission may be subject; and
  - (b) in accordance with the Technical Instructions and any conditions specified therein.
  - (2) A person shall not:
    - (a) take or cause to be taken on board,
    - (b) suspend or cause to be suspended beneath, or
    - (c) delivery or cause to be delivered for loading on or suspension beneath
    - an aircraft any goods which he knows or ought to know or suspect to be goods capable of posing significant risk to health, safety or property when carried by air, unless the provisions of these Regulations are complied with.
- (3) These Regulations shall not apply to dangerous goods of a type specified in Chapter 1.1.2(a), 1.1.2(b) and 2.3 of Part 1 and Chapter 1.2 of Part 9 of the Technical Instructions which are carried, loaded or suspended in accordance with the provisions of the aforesaid Chapters 1.1.2(a), 1.1.2(b) and 2.3 of Part 1 and Chapter 1.2 of Part 9 and which are:
  - (a) articles and equipment which are required to be carried on an aircraft by or under the Order or are otherwise intended for use on an aircraft for the purpose of the good order of the flight in accordance with normal practice whether or not, in either case, such articles and equipment are required to be carried or intended to be used on that particular flight;
  - (b) solely intended for the use of passengers or crew members or for sale to the passengers or crew members of the aircraft during the flight in question;
  - (c) to provide during the flight veterinary aid or a humane killer for an animal; or
  - (d) to provide during the flight medical aid to a person:

Provided that goods specified in sub-paragraphs (c) and (d) shall only be carried if:

- (i) they are or may be required for use during the flight;
- (ii) they are or may be required for use during a subsequent flight by the same aircraft and it will not be practicable to load the goods on the aircraft in the intervening period before the commencement of that subsequent flight, or
- (iii) they were used or might have been required for use during a previous flight by the same aircraft and it has not been practicable to unload them from the aircraft since that flight.
- (4) Save for Regulations 3(1)(a), 7(1) but only to the extent that it refers to the provisions in Chapter 2.1 of Part 5 of the Technical Instructions and 7(2) and 8(3) of these Regulations, these Regulations shall not apply to dangerous goods of the classifications specified in Chapter 2.5 of Part 1 of the Technical Instructions provided that:
  - (a) the dangerous goods do not exceed the appropriate quantity limitations specified therein; and
  - (b) such other conditions as are specified therein are complied with.
- **4.**—(1) An aircraft shall not carry dangerous goods as cargo unless the shipper of the goods has furnished the operator of the aircraft with a dangerous goods transport document, except that such a document shall not be required in respect of such categories of dangerous goods as may be specified in the Technical Instructions as being goods in respect of which a dangerous goods transport document is not required.

- (2) The dangerous goods transport document shall be completed in duplicate by the shipper and shall:
  - (a) describe the dangerous goods in accordance with and contain such information as is required by the provisions of Chapter 4.1 of Part 4 of the Technical Instructions;
  - (b) contain a signed declaration that the Technical Instructions have been complied with in that the dangerous goods—
    - (i) are fully and accurately described, and
    - (ii) are correctly classified, packed, marked and labelled, and
    - (iii) are in a proper condition for carriage by air.
- (3) The shipper of dangerous goods shall furnish the operator of the aircraft with such other documents in respect of dangerous goods as are required by Part 3 and Chapters 4.3 and 4.5 of Part 4 of the Technical Instructions.
- (4) The operator of an aircraft shall preserve for not less than six months any dangerous goods transport document or other document in respect of dangerous goods which has been furnished to him in accordance with this Regulation.

## Shipper's responsibilities

- **5.** Before consigning any package containing dangerous goods for carriage by air the shipper shall ensure that:
- (a) the goods are not of a category whose carriage by air is prohibited by the provisions of Chapters 2.1 and 2.2 of Part 1 of the Technical Instructions;
- (b) the goods are classified and packed in accordance with Chapter 2.6 of Part 1 and Parts 2, 3 and 8 of the Technical Instructions and the packagings used are in accordance with such provisions of Part 7 of the Technical Instructions as apply to the goods;
- (c) the package is marked and labelled in accordance with such provisions of Chapter 11 of Part 2 and Part 3 as relate to marking and labelling and in accordance with Chapters 2 and 3 of Part 4 of the Technical Instructions;
  - (d) the package is in a fit condition for carriage by air;
- (e) the dangerous goods transport document required by Regulation 4 of these Regulations has been completed and that the declaration therein has been signed by him or on his behalf.

#### Operator's responsibilities

- **6.**—(1) The operator of an aircraft in which any package or unit load device containing dangerous goods is to be carried shall satisfy himself by making an inspection:
  - (a) that the package is marked and labelled in accordance with the provisions of these Regulations, such provisions of Chapter 11 of Part 2 and Part 3 as relate to marking and labelling and Chapters 2 and 3 of Part 4 of the Technical Instructions before accepting the package;
  - (b) that the package is not leaking or damaged so that the contents may escape—
    - (i) before accepting the package;
    - (ii) before loading or causing the package to be loaded on board the aircraft or before suspending or causing the package to be suspended beneath the aircraft, as the case may be;
    - (iii) upon loading the package from or from beneath the aircraft;

- (c) that the unit load device is free from any evidence of leakage from or damage to any dangerous goods contained therein before loading or causing the unit load device to be loaded on board the aircraft or before suspending or causing the unit load device to be suspended beneath the aircraft, as the case may be.
- (a) (2) (a) For the purpose of each of the inspections required by paragraph (1)(a) and (1)(b)(i) of this Regulation, an acceptance check list shall be used and the results of that inspection shall be recorded in accordance with the form thereof.
- (b) The acceptance check list shall be in such form and shall provide for the entry of such details as will enable the relevant inspection to be fully and accurately made by reference to and completion of that list.
- (c) The operator of an aircraft shall preserve for not less than six months a record of any acceptance check list completed in accordance with this Regulation. The record shall be in a legible or a non-legible form so long as the recording is capable of being reproduced in legible form.
- (3) The operator shall not load or cause to be loaded on an aircraft or suspend or cause to be suspended beneath an aircraft any package or unit load device containing dangerous goods which on inspection is found to be leaking or damaged so that the contents or the dangerous goods therein may escape or be damaged.
- (4) The operator shall unload or cause to be unloaded any package containing dangerous goods which appears to be leaking or damaged on board or beneath an aircraft and shall ensure other cargo or baggage loaded or suspended beneath that aircraft is in a fit state for carriage by air and has not been contaminated.
- (5) The operator shall after unloading inspect for signs of damage or contamination in any part of the aircraft, or any sling or other apparatus which has been used to suspend goods beneath the aircraft, in which:
  - (a) a unit load device containing dangerous goods was stowed, or
- (b) any damaged or leaking package containing dangerous goods was loaded, and the operator shall remove or repair any contamination or damage.
- (6) The operator of an aircraft shall not permit it to fly for the purpose of carrying passengers or cargo if he knows or suspects radioactive materials to have leaked in or contaminated the aircraft or any sling or other apparatus attached to the aircraft unless the radiation level resulting from the fixed contamination at any accessible surface and the non-fixed contamination are not more than the values specified in Chapter 3.2 of Part 5 of the Technical Instructions.

## Method of loading by operator

- 7.—(1) The operator shall ensure that any package containing dangerous goods is loaded, stowed and unloaded from or from beneath an aircraft in accordance with the provisions in Chapter 2 of Part 5 of the Technical Instructions which apply to that category of dangerous goods.
- (2) An aircraft shall not carry any dangerous goods either in any compartment occupied by passengers or in the flight crew compartment, except in circumstances permitted by the provisions of Chapter 2.1 of Part 5 of the Technical Instructions.

Provisions of information and training programmes by operators and shippers

**8.**—(1) The operator of an aircraft in which dangerous goods are to be carried shall, before the flight begins, provide the commander of the aircraft with written information specifying the matters required by the provisions of Chapter 4.1 of Part 5 of the Technical Instructions and shall preserve a copy thereof for not less than six months.

- (2) The operator of an aircraft in which passengers are to be carried or his agent shall notify them of the categories of dangerous goods which may not be taken on board an aircraft either as checked baggage or accompanying a passenger by the provision of information with each passenger ticket which shall be sufficient in prominence for this purpose and by displaying notices, sufficient in number and prominence for this purpose, at each of the places at an airport where the operator or his agent issues tickets, checks in baggage or maintains areas to assemble passengers to board the aircraft.
- (3) The operator of an aircraft and a shipper of dangerous goods by air and, in each case, any agent thereof shall inform any of their respective employees whose duties include a function connected with the carriage of passengers or cargo by air of the provisions of the Technical Instructions and for this purpose shall establish and undertake training programmes, as required by Chapter 1 of Part 6 of the Technical Instructions, which shall be submitted to the Governor for approval on such occasions as the Governor may require and which shall be amended as the Governor may require.

#### Production of documents and records

- **9.** The operator of an aircraft shall, within a reasonable time after being requested so to do by an authorised person, cause to be produced to that person such of the following documents as may have been requested by that person:
  - (a) the written permission referred to in Regulation 3(1) of these Regulations;
- (b) the dangerous goods transport document or other document in respect of any dangerous goods referred to in Regulation 4 of these Regulations;
- (c) the completed acceptance check list in a legible form in respect of any dangerous goods, referred to in Regulation 6(2) of these Regulations;
- (d) a copy of the written information provided to the commander of the aircraft in respect of any dangerous goods, referred to in Regulation 8(1) of these Regulations.

Dropping articles for agricultural, horticultural, forestry or pollution control purposes

**10.** Subject to the provisions of Regulation 3(1)(a) of these Regulations, nothing in these Regulations shall apply to any aircraft flying in order to drop articles for the purpose of agriculture, horticulture, forestry or pollution control.

The following Table shows, in relation to each Article of this Order, the corresponding Article in the Air Navigation (Overseas Territories) Order 1977, as amended.

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