

**1986 No. 1304****CIVIL AVIATION****The Air Navigation (Noise Certification) Order 1986**

*Laid before Parliament in draft*

*Made* - - - 25th July 1986

*Coming into Operation* 1st August 1986

At the Court at Buckingham Palace, the 25th day of July 1986

Present,

The Queen's Most Excellent Majesty in Council

Whereas a draft of this Order has been laid before and approved by a resolution of each House of Parliament, in accordance with section 102(3) of the Civil Aviation Act 1982(a):

Now, therefore, Her Majesty, in exercise of the powers conferred upon Her by sections 60, 61, 101 and 102 of the Civil Aviation Act 1982 and of all other powers enabling Her in that behalf, is pleased, by and with the advice of Her Privy Council, to order, and it is hereby ordered, as follows:—

*Citation and commencement*

1. This Order may be cited as the Air Navigation (Noise Certification) Order 1986 and shall come into operation on 1st August 1986.

*Revocation*

2. The Air Navigation (Noise Certification) Order 1984(b) is hereby revoked.

*Interpretation*

3.— (1) In this Order:—

“An International Standard Atmosphere at sea level” has the meaning specified in Schedule 2 to this Order;

“The Authority” means the Civil Aviation Authority;

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(a) 1982 c.16.  
(b) S.I. 1984/368.

“Authorised person” means any constable and any person authorised by the Authority (whether by name or by class or description) either generally or in relation to a particular case or class of cases;

“BCAR” means the British Civil Airworthiness Requirements Section N—Noise Issue 2 dated 10th November 1978 as amended by the Authority’s Blue Paper N810 dated 12th January 1984 and by the Authority’s Blue Paper N835 dated 12th June 1986;

“By-pass ratio” means the ratio of the air mass flow through the by-pass ducts of a gas turbine engine to the air mass flow through combustion chambers calculated at maximum thrust when the engine is stationary in an International Standard Atmosphere at sea level;

“dB(A)” means the unit for expressing A-weighted overall sound pressure level as specified in BCAR;

“EPNdB” means the unit for expressing effective perceived noise level as specified in BCAR;

“LAX” means the A-weighted noise energy of a single aircraft noise event as specified in BCAR;

“The Convention” means the Convention on International Civil Aviation signed on behalf of the United Kingdom at Chicago on 7th December 1944;

“Noise certificate” means a certificate issued or validated or other document approved by the competent authority of a State to the effect that the aircraft to which the certificate or other document relates complies with the applicable noise certification requirements in force in that State;

“prescribed” means prescribed by Regulations made by the Secretary of State under this Order.

(2) Expressions used in this Order shall, unless the context otherwise requires, have the same respective meanings as in the Air Navigation Order 1985(a).

(3) A power to make regulations under this Order shall include the power to make different provisions with respect to different classes of aircraft and with respect to different circumstances and to make such incidental and supplementary provisions as are necessary or expedient for carrying out the purposes of this Order.

#### *Application of Order*

4. This Order shall apply to:—

- (a) every propeller driven aeroplane having a maximum total weight authorised of 5,700 kg. or less;
- (b) every aeroplane which is capable of sustaining level flight at a speed in excess of Flight Mach 1.0, being an aeroplane in respect of which applicable standards are specified in article 6(9) of this Order;
- (c) every aeroplane having an empty weight not exceeding 150 kg., a lifting surface area of not less than 10 square metres and a lifting surface loading not exceeding 10 kg. per square metre at empty weight and which is designed to carry not more than two persons;

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(a) S.I. 1985/1643.

- (d) every other aeroplane which in accordance with its certificate of airworthiness has a take-off distance required, at maximum total weight authorised on a hard level runway in still air in an International Standard Atmosphere at sea level, of more than 610 metres;
- (e) every helicopter, being a helicopter in respect of which applicable standards are specified in article 6(10) of this Order.

*Requirement of noise certificate*

5.— (1) Subject to paragraph (2) of this article an aircraft to which this Order applies shall not land or take-off in the United Kingdom unless—

- (a) (i) in respect of an aircraft specified in paragraphs (a), (b), (d) and (e) of article 4 of this Order there is in force in respect of that aircraft a noise certificate—
    - (aa) issued by the Authority under article 6 of this Order; or
    - (bb) issued by the competent authority of the country in which the aircraft is registered, being a country prescribed as one which applies standards which in the opinion of the Secretary of State are substantially equivalent to those required for the issue of a noise certificate by the Authority; or
    - (cc) issued or validated in pursuance of the Convention by the competent authority of the State in which the aircraft is registered, and
  - (ii) in respect of an aeroplane specified in paragraph (c) of article 4 of this Order there is in force in respect of that aeroplane a noise certificate—
    - (aa) issued by the Authority under article 6 of this Order; or
    - (bb) issued by the competent authority of the country in which the aeroplane is registered, being a country which applies standards which in the opinion of the Authority are substantially equivalent to those required for the issue of a noise certificate by the Authority, and
  - (b) any conditions subject to which the certificate was issued are complied with.
- (2) The foregoing prohibition shall not apply to—
- (a) an aircraft flying in accordance with the “A Conditions” or the “B Conditions” set forth in Schedule 2 to the Air Navigation Order 1985;
  - (b) an aircraft landing or taking-off at a prescribed place.

*Issue of noise certificate by the Civil Aviation Authority and validity of noise certificate*

6.— (1) The Authority shall issue a noise certificate in respect of any aircraft to which this Order applies if it is satisfied that the aircraft complies with the applicable standards specified in this article in relation to the noise made by the aircraft, and for that purpose the applicant for a certificate shall furnish such

evidence and submit the aircraft to such flying trials and other tests as the Authority may require.

(2) The standards applicable to an aeroplane having turbojet or turbofan engines (not being an aeroplane of a description referred to in paragraph (3) or (4) of this article) shall be those specified in Part I of Schedule 1 to this Order.

(3) Subject to paragraph (11) of this article, the standards applicable to an aeroplane having turbojet or turbofan engines which, in the opinion of the Authority—

- (a) conforms to a prototype aeroplane in respect of which the authorities of the State of manufacture received an application for a certificate of airworthiness on or after 6th October 1977 and did not reject that application; or
- (b) conforms to a modification of such a prototype aeroplane, being a modification in respect of which the authorities of the State of manufacture received an application to modify the certificate of airworthiness for the prototype on or after 6th October 1977 and did not reject that application,

shall be those specified in Part II of the said Schedule 1.

(4) Subject to paragraph (11) of this article, the standards applicable to an aeroplane having turbofan engines which, in the opinion of the Authority, conforms to a modification of a prototype aeroplane (being a prototype in respect of which the authorities of the State of manufacture received an application for a certificate of airworthiness before 6th October 1977 and did not reject that application and being a modification in respect of which the authorities of the State of manufacture received an application to modify the certificate of airworthiness for the prototype on or after the relevant date and did not reject that application) shall be those specified in Part III of the said Schedule 1; and the relevant date for an aeroplane having turbofan engines with a by-pass ratio of 2 or more is 6th October 1977 and for an aeroplane having turbofan engines with a by-pass ratio of less than 2 is 26th November 1981.

(5) The standards applicable to a propeller driven aeroplane having a maximum total weight authorised of more than 5,700 kg. (not being an aeroplane of a description referred to in paragraphs (6), (7) and (8) of this article) shall be those specified in Part IV of the said Schedule 1.

(6) The standards applicable to a propeller driven aeroplane having a maximum total weight authorised of more than 5,700 kg. (not being an aeroplane of a description referred to in paragraph (8) of this article) which in the opinion of the Authority—

- (a) conforms to a prototype aeroplane being a prototype in respect of which the authorities of the State of manufacture received an application for a certificate of airworthiness before 6th October 1977 and did not reject that application and in respect of which the certificate of airworthiness for the aeroplane was first issued on or after 26th November 1981; or
- (b) conforms to a modification of a prototype aeroplane being a prototype in respect of which the authorities of the State of manufacture received an application for a certificate of airworthiness before 6th October

1977 and did not reject that application and in respect of which the certificate of airworthiness for the individual aeroplane was first issued on or after 26th November 1981,

shall be those specified in Part I of the said Schedule 1.

(7) Subject to paragraph (11) of this article, the standards applicable to a propeller driven aeroplane having a maximum total weight authorised of more than 5,700 kg. (not being an aeroplane of a description referred to in paragraph (8) of this article) which in the opinion of the Authority—

- (a) conforms to a prototype aeroplane being a prototype in respect of which the authorities of the State of manufacture received an application for a certificate of airworthiness on or after 1st January 1985 and did not reject that application; or
- (b) conforms to a modification of such a prototype aeroplane, being a modification in respect of which the authorities of the State of manufacture received an application to modify the certificate of airworthiness for the prototype on or after 1st January 1985 and did not reject that application,

shall be those specified in Part II of the said Schedule 1.

(8) Except in respect of an aeroplane specified in paragraph (c) of article 4 of this Order, the standards applicable to a propeller driven aeroplane having a maximum total weight authorised of 5,700 kg. or less and to a propeller driven aeroplane having a maximum total weight authorised of 6,500 kg. or less, being in the opinion of the Authority a modification of a prototype aeroplane having a maximum total weight authorised of 5,700 kg. or less, shall be those specified in Part V of the said Schedule 1.

(9) The standards applicable to an aeroplane capable of sustaining level flight at a speed in excess of Flight Mach 1.0 which in the opinion of the Authority—

- (a) conforms to a prototype aeroplane being a prototype in respect of which the authorities of the State of manufacture received an application for a certificate of airworthiness before 1st January 1975 and did not reject that application and in respect of which a certificate of airworthiness was first issued on or after 26th November 1981; or
- (b) conforms to a modification of a prototype aeroplane being a prototype in respect of which the authorities of the State of manufacture received an application for a certificate of airworthiness before 1st January 1975 and did not reject that application and in respect of which the certificate of airworthiness for the individual aeroplane was first issued on or after 26th November 1981,

shall be that the noise made by the aeroplane shall be no louder than that made by the prototype when the noise level of the prototype is measured in accordance with paragraph 2 of Part I of the said Schedule 1 in the noise certification reference conditions set out in paragraph 1 thereof.

(10) Subject to paragraph (11) of this article, the standards applicable to a helicopter which in the opinion of the Authority—

- (a) conforms to a prototype helicopter in respect of which the authorities of the State of manufacture received an application for a certificate of

airworthiness on or after 1st August 1986 and did not reject that application; or

(b) conforms to a modification of a helicopter, being a modification in respect of which the authorities of the State of manufacture received an application to modify the certificate of airworthiness for the prototype on or after 1st August 1986 and did not reject that application; or

(c) conforms to a modification of a helicopter being a helicopter of an airworthiness standard equivalent to that which would have been required for the issue of a certificate of airworthiness for a prototype helicopter by the authorities of the State of manufacture if the application had been made before 1st August 1986 and being a modification in respect of which the authorities of the State of manufacture received an application to modify such a helicopter on or after 1st August 1986 and did not reject that application,

shall be those specified in Part VIII of the said Schedule 1.

(11) For the purposes of determining the standard applicable to an aircraft where the interval between—

(a) the application for a certificate of airworthiness for a prototype aircraft and the first issue of a certificate for an aircraft of that type; or

(b) the application to modify a certificate of airworthiness for a prototype and the first issue of a certificate for an aircraft of that type as modified,

exceeds 5 years, the date on which the application was made shall, unless the Authority in a particular case otherwise directs, be deemed to be 5 years before the date of the first issue of the certificate.

(12) The standards applicable to an aeroplane specified in paragraph (c) of article 4 of this Order shall be those—

(a) specified in Part VI of Schedule 1 to this Order for any such aeroplane which is registered in the United Kingdom before 1st April 1986; or

(b) specified in Part VII of Schedule 1 to this Order for any such aeroplane which is registered in the United Kingdom on or after 1st April 1986.

(13) The Authority shall, except in respect of an aeroplane specified in paragraph (c) of article 4 of this Order, issue every noise certificate subject to a condition as to the maximum total weights at which the aircraft may take-off and land and may issue such a certificate subject to such other conditions relating to standards as to noise as it thinks fit.

(14) Subject to paragraph (15) of this article and article 9 of this Order, a noise certificate issued under this article shall remain in force without limit of time.

(15) A noise certificate issued under this article in respect of an aircraft registered in the United Kingdom shall cease to be sufficient for the purposes of article 5 of this Order—

(a) if the aircraft or any part of it is modified, in any way which affects the ability of the aircraft to comply with the noise standards required by this Order, otherwise than in a manner and with material of a type

approved by the Authority either generally or in relation to a class of aircraft or to a particular aircraft;

- (b) until the completion of any inspection or test of the aircraft required by the Authority to be made for the purpose of ascertaining whether the aircraft continues to comply with the noise standards required by this Order.

(16) The Authority may, for the purposes of this article, accept reports furnished to it by a person whom it may approve, either absolutely or subject to such conditions as it thinks fit, as qualified to furnish such reports.

*Noise certificate to be carried*

7.— (1) An aircraft shall not land or take-off in the United Kingdom unless it carries any noise certificate which it is required to carry under the law of the country in which it is registered.

(2) An aircraft registered in the United Kingdom shall, when in flight, whether within the United Kingdom or elsewhere, carry any noise certificate which is required by this Order to be in force in respect of that aircraft:

Provided that if the flight is intended to begin and end at the same aerodrome, the certificate may be kept at that aerodrome instead of being carried in the aircraft.

*Production of noise certificate*

8. The commander of an aircraft shall, within a reasonable time after being requested to do so by an authorised person, cause to be produced to that person the noise certificate in force in respect of that aircraft.

*Revocation, suspension and variation of noise certificates*

9.— (1) The Authority may, if it thinks fit, provisionally suspend any noise certificate, approval, exemption or other document issued under this Order pending inquiry into or consideration of the case. The Authority may, after sufficient ground being shown to its satisfaction after due inquiry, revoke, suspend or vary any such certificate, approval, exemption or other document.

(2) The holder or any person having the possession or custody of any noise certificate, approval, exemption or other document which has been revoked, suspended or varied under this Order shall surrender it to the Authority within a reasonable time after being required to do so by it.

(3) The breach of any condition subject to which any noise certificate, approval, exemption or other document has been issued under this Order shall render the certificate invalid during the continuance of the breach.

*Offences in relation to noise certificates*

10.— (1) A person shall not with intent to deceive—

- (a) use any noise certificate issued or required under this Order which has been revoked or suspended, or to which he is not entitled; or

- (b) lend any such certificate to, or allow it to be used by, any other person; or
- (c) make any false representation for the purpose of procuring for himself or any other person the issue, renewal or variation of any such certificate.

(2) A person shall not purport to issue any noise certificate under this Order unless he has been authorised to do so.

*Power to prevent aircraft flying*

**11.—** (1) If it appears to the Authority or an authorised person that any aircraft is intended or likely to be flown in such circumstances that article 5 of this Order would be contravened in relation to the flight, the Authority or that authorised person may direct the operator or the commander of the aircraft that he is not to permit the aircraft to make the flight or any other flight of such description as may be specified in the direction, until the direction has been revoked by the Authority or by an authorised person, and the Authority or that authorised person may take such steps as are necessary to detain the aircraft.

(2) If the operator or the commander of an aircraft fails without reasonable excuse to comply with a direction given to him pursuant to paragraph (1) of this article, he shall be guilty of an offence.

(3) For the purposes of paragraph (1) of this article, the Authority or any authorised person may enter upon and inspect any aircraft.

*Right of access to aerodromes and other places*

**12.** The Authority and any authorised person shall have for the purpose of ascertaining whether the provisions of this Order are being complied with, the right of access at all reasonable times—

- (a) to any aerodrome for the purpose of inspecting any aircraft on the aerodrome or any document which it, or he, has power to demand under this Order, and for the purpose of detaining any aircraft under this Order; and
- (b) to any place where an aircraft has landed, for the purpose of inspecting the aircraft or any document which it, or he, has power to demand under this Order and for the purpose of detaining the aircraft under this Order:

Provided that access to a Government aerodrome shall only be obtained with the permission of the person in charge of the aerodrome.

*Obstruction of persons*

**13.** A person shall not intentionally obstruct or impede any person acting in the exercise of his powers or the performance of his duties under this Order.

*Penalties*

**14.—** (1) If any provision of this Order is contravened in relation to an



aircraft the operator of that aircraft and the commander thereof shall (without prejudice to the liability of any other person under this Order for that contravention) be deemed for the purposes of the following provisions of this article to have contravened that provision unless he proves that the contravention occurred without his consent or connivance and that he exercised all due diligence to prevent the contravention.

(2) If it is proved that an act or omission of any person which would otherwise have been a contravention by that person of a provision of this Order was due to any cause not avoidable by the exercise of reasonable care by that person, the act or omission shall be deemed not to be a contravention by that person of that provision.

(3) If any person contravenes any provisions of this Order, not being a provision referred to in paragraph (4) of this article, he shall be liable on summary conviction to a fine not exceeding £400.

(4) If any person contravenes article 5, 10, 11 or 13 of this Order he shall be liable on summary conviction to a fine not exceeding £1000.

*Application of Order to the Crown and visiting forces, etc.*

15.— (1) Subject to the following provisions of this article, the provisions of this Order shall apply to, or in relation to, aircraft belonging to or exclusively employed in the service of Her Majesty, as they apply to or in relation to other aircraft and for the purposes of such application the Department or other authority for the time being responsible on behalf of Her Majesty for the management of the aircraft shall be deemed to be the operator of the aircraft:

Provided that nothing in this article shall render liable to any penalty any Department or other authority responsible on behalf of Her Majesty for the management of any aircraft.

(2) The naval, military and air force authorities and members of any visiting force and any international headquarters and the members thereof and property held or used for the purpose of such a force or headquarters shall be exempt from the provisions of this Order to the same extent as if that force or headquarters formed part of the forces of Her Majesty raised in the United Kingdom and for the time being serving there.

(3) Nothing in this Order shall apply to or in relation to any military aircraft.

*Exemption*

16. The Authority after consultation with the Secretary of State may exempt from any of the provisions of this Order or any Regulations made thereunder any aircraft or persons or classes of aircraft or persons, either absolutely or subject to such conditions as it thinks fit.

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*Extra-territorial effect of the Order*

17.— (1) Except where the context otherwise requires, the provisions of this Order—

- (a) insofar as they apply (whether by express reference or otherwise) to aircraft registered in the United Kingdom, shall apply to such aircraft wherever they may be;
- (b) insofar as they apply as aforesaid to other aircraft shall apply to such aircraft when they are within the United Kingdom;
- (c) insofar as they prohibit, require or regulate (whether by express reference or otherwise) the doing of anything by the commander of any aircraft registered in the United Kingdom, shall apply to him wherever he may be; and
- (d) insofar as they prohibit, require or regulate as aforesaid the doing of anything in relation to any aircraft registered in the United Kingdom by other persons shall, where such persons are Commonwealth citizens, British protected persons or citizens of the Republic of Ireland, apply to them wherever they may be.

(2) Nothing in this article shall be construed as extending to make any person guilty of an offence in any case in which it is provided by section 3(1) of the British Nationality Act 1948(a) (which limits the criminal liability of citizens of certain countries) that that person shall not be guilty of an offence.

*G. I. de Deney,*  
Clerk of the Privy Council.

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(a) 1948 c.56.

## Article 6

## SCHEDULE 1

## PART I

*Noise standards required for issue of a noise certificate to aeroplanes specified in articles 6(2), (6) and (9)*

1. In this Part of this Schedule—

“the noise certification reference conditions” means conditions in which—

- (i) atmospheric pressure at sea level is 1013.25 millibars;
- (ii) ambient air temperature is 25°C;
- (iii) relative humidity is 70%;
- (iv) there is zero wind; and
- (v) the maximum take-off and landing weights of the aeroplane are those at which noise certification is requested by the applicant for the certificate.

2. The noise levels required by paragraph 3 of this Part of this Schedule shall be measured at the following points—

- (a) on take-off, at a point on a line parallel to and 650 metres from the centre-line or extended centre-line of the runway where it appears to the Authority that the noise during take-off is greatest;
- (b) on take-off, at a point on the extended centre-line of the runway, 6,500 metres from the start of the take-off run; and
- (c) on the approach to landing at a point on the extended centre-line of the runway, 120 metres vertically below the 3° descent path.

3.—(1) Subject to the provisions of paragraph 4 of this Part of this Schedule an aeroplane having the maximum total weight authorised specified in the first column of the following Table shall not, at the points referred to at (a), (b) and (c) of paragraph 2 of this Part of this Schedule, exceed in the noise certification reference conditions the noise levels specified in relation to those points in the 2nd, 3rd and 4th columns of that Table, as shown by flying trials.

TABLE

Maximum total weight authorised of aeroplane	Noise level in EPNdB		
	At point (a)	At point (b)	At point (c)
272,000 kg. or more	108	108	108
34,000 kg. or less	102	93	102

(2) Where the maximum total weight authorised of the aeroplane is between the weights specified in the above Table, the noise levels which are not to be exceeded shall vary linearly according to the logarithm of the maximum total weight authorised of the aeroplane.

(3) The necessary corrections shall be made where the flying trials are carried out in conditions other than the noise certification reference conditions.

4. The noise levels specified in paragraph 3 of this Part of this Schedule may be exceeded at one or two of the measuring points specified in paragraph 2 if—

- (a) the sum of the excesses does not exceed 4 EPNdB;
- (b) at no measuring point is the excess greater than 3 EPNdB; and
- (c) the excesses are completely offset by reductions at the other measuring points.

## PART II

*Noise standards required for issue of a noise certificate to aeroplanes specified in articles 6(3) and (7)*

1. In this Part of this Schedule—

“the noise certification reference conditions” means conditions in which—

- (i) atmospheric pressure at sea level is 1013.25 millibars;
- (ii) ambient air temperature is 25°C;
- (iii) relative humidity is 70%;
- (iv) there is zero wind; and
- (v) the maximum take-off and landing weights of the aeroplane are those at which noise certification is requested by the applicant for the certificate.

2. The noise levels required by paragraph 3 of this Part of this Schedule shall be measured at the following points—

- (a) on take-off, at a point on a line parallel to and 450 metres from the centre-line or extended centre-line of the runway where it appears to the Authority that the noise during take-off is greatest;
- (b) on take-off, at a point on the extended centre-line of the runway, 6,500 metres from the start of the take-off run; and
- (c) on the approach to landing, at a point on the extended centre-line of the runway, 120 metres vertically below the 3° descent path.

3.—(1) Subject to the provisions of paragraph 4 of this Part of this Schedule an aeroplane having the maximum total weight authorised specified in the first column of the following Table shall not, at the points referred to at (a), (b) and (c) of paragraph 2 of this Part of this Schedule, exceed in the noise certification reference conditions the noise levels in relation to those points in the 2nd, 3rd, 4th and 5th columns (whichever is applicable having regard to the number of engines installed in the aeroplane) and in the 6th column of that Table, as shown by flying trials.

TABLE

Maximum total weight authorised of aeroplane	Noise level in EPNdB				At point (c)
	At point (a)	At point (b)			
		2 engines	3 engines	4 engines	
400,000 kg. or more	103				
385,000 kg. or more		101	104	106	
280,000 kg. or more					105
48,125 kg. or less		89			
35,000 kg. or less	94				98
28,615 kg. or less			89		
20,234 kg. or less				89	

(2) Where the maximum total weight authorised of the aeroplane is between the weights specified in the above Table, the noise levels which are not to be exceeded shall vary linearly according to the logarithm of the maximum total weight authorised of the aeroplane.

(3) The necessary corrections shall be made where flying trials are carried out in conditions other than the noise certification reference conditions.

4. The noise levels specified in paragraph 3 of this Part of this Schedule may be exceeded at one or two of the measuring points specified in paragraph 2 if—

- (a) the sum of the excesses does not exceed 3 EPNdB;
- (b) at no measuring point is the excess greater than 2 EPNdB; and
- (c) any excesses are completely offset by reductions at the other measuring point or points.

### PART III

*Noise standards required for issue of a noise certificate to aeroplanes specified in article 6(4)*

1. In this Part of this Schedule—

“the noise certification reference conditions” means conditions in which—

- (i) atmospheric pressure at sea level is 1013.25 millibars;
- (ii) ambient air temperature is 25°C;
- (iii) relative humidity is 70%;
- (iv) there is zero wind; and
- (v) the maximum take-off and landing weights of the aeroplane are those at which noise certification is requested by the applicant for the certificate.

2. The noise levels required by paragraph 3 of this Part of this Schedule shall be measured at the following points—

- (a) on take-off, at a point on a line parallel to and 650 metres from the centre-line or extended centre-line of the runway where it appears to the Authority that the noise during take-off is greatest;
- (b) on take-off, at a point on the extended centre-line of the runway, 6,500 metres from the start of the take-off run; and
- (c) on the approach to landing, at a point on the extended centre-line of the runway, 120 metres vertically below the 3° descent path.

3.—(1) Subject to the provisions of paragraph 4 of this Part of this Schedule an aeroplane having the maximum total weight authorised specified in the first column of the following Table shall not, at the points referred to at (a), (b) and (c) of paragraph 2 of this Part of this Schedule, exceed in the noise certification reference conditions the noise levels specified in relation to those points in the 2nd, 3rd, 4th or 5th columns (whichever is applicable having regard to the number of engines installed in the aeroplane) and in the 6th column of that Table, as shown by flying trials.

TABLE

Maximum total weight authorised of aeroplane	Noise level in EPNdB				At point (c)
	At point (a)	2 engines	3 engines	4 engines	
400,000 kg. or more	106				
325,000 kg. or more		104	107	108	108
280,000 kg. or more					
133,447 kg.			97.9	102.9	
66,724 kg.		93			
48,312 kg. or less					101
35,000 kg. or less	97				
34,000 kg. or less			93	93	

(2) Where the maximum total weight authorised of the aeroplane is between the weights specified in the above Table, the noise levels which are not to be exceeded shall vary linearly according to the logarithm of the maximum total weight authorised of the aeroplane.

(3) The necessary corrections shall be made where flying trials are carried out in conditions other than the noise certification reference conditions.

4. The noise levels specified in paragraph 3 of this Part of this Schedule may be exceeded at one or two of the measuring points specified in paragraph 2 if—

- (a) the sum of the excesses does not exceed 4 EPNdB;
- (b) at no measuring point is the excess greater than 3 EPNdB; and
- (c) any excesses are completely offset by reductions at the other measuring point or points.

## PART IV

*Noise standards required for issue of a noise certificate to aeroplanes specified in article 6(5)*

1. In this Part of this Schedule—

“the noise certification reference conditions” means conditions in which—

- (i) atmospheric pressure at sea level is 1013.25 millibars;
- (ii) ambient air temperature is 25°C;
- (iii) relative humidity is 70%;
- (iv) there is zero wind; and
- (v) the maximum take-off and landing weights of the aeroplane are those at which noise certification is requested by the applicant for the certificate.

2. The noise levels required by paragraph 3 of this Part of this Schedule shall be measured at the following points—

- (a) on take-off, at a point on a line parallel to and 450 metres from the centre-line or extended centre-line of the runway where it appears to the Authority that the noise during take-off is greatest;
- (b) on take-off, at a point on the extended centre-line of the runway, 6,500 metres from the start of the take-off run; and
- (c) on the approach to landing, at a point on the extended centre-line of the runway, 120 metres vertically below the 3° descent path.

3.—(1) Subject to the provisions of paragraph 4 of this Part of this Schedule an aeroplane having the maximum total weight authorised specified in the first column of the following Table shall not, at the points referred to at (a), (b) and (c) of paragraph 2 of this Part of this Schedule, exceed in the noise certification reference conditions the noise levels specified in relation to those points in the 2nd, 3rd and 4th columns of that Table, as shown by flying trials.

TABLE

Maximum total weight authorised of aeroplane	Noise level in EPNdB		
	At point (a)	At point (b)	At point (c)
384,666 kg. or more	103		105
358,906 kg. or more		106	
34,000 kg. or less	96	89	98

(2) Where the maximum total weight authorised of the aeroplane is between the weights specified in the above Table, the noise levels which are not to be exceeded shall vary linearly according to the logarithm of the maximum total weight authorised of the aeroplane.

(3) The necessary corrections shall be made where flying trials are carried out in conditions other than the noise certification reference conditions.

4. The noise levels specified in paragraph 3 of this Part of this Schedule may be exceeded at one or two of the measuring points specified in paragraph 2 if—

- (a) the sum of the excesses does not exceed 3 EPNdB;
- (b) at no measuring point is the excess greater than 2 EPNdB; and
- (c) any excesses are completely offset by reductions at the other measuring point or points.

#### PART V

*Noise standards required for issue of a noise certificate to aeroplanes specified in article 6(8)*

1. In this Part of this Schedule—

“the noise certification reference conditions” means conditions in which—

- (i) atmospheric pressure at sea level is 1013.25 millibars;
- (ii) ambient air temperature is 25°C; and
- (iii) the maximum take-off weights of the aeroplane are those at which noise certification is requested by the applicant for the certificate.

2. The noise level required by paragraph 3 of this Part of this Schedule shall be measured in a level fly-over, at a point 300 metres vertically below the aeroplane.

3.—(1) An aeroplane having the maximum total weight authorised specified in the 1st column of the following Table shall not, at the point referred to in paragraph 2 of this Part of this Schedule, exceed in the noise certification reference conditions the noise level specified in the 2nd column of that Table, as shown by flying trials.

TABLE

Maximum total weight authorised of aeroplane	Peak noise level in dB(A) at measurement point
1500 kg. or more	80
600 kg. or less	68

(2) Where the maximum total weight authorised of the aeroplane is between the weights specified in the above Table, the noise level which is not to be exceeded shall vary linearly according to the maximum total weight authorised of the aeroplane.

(3) The necessary corrections shall be made where flying trials are carried out in conditions other than the noise certification reference conditions.



## PART VI

*Noise standards required for issue of a noise certificate to aeroplanes specified in article 6(12)(a)*

1. In this Part of this Schedule—

“the noise certification reference conditions” means conditions in which—

- (i) atmospheric pressure at sea level is 1013.25 millibars;
- (ii) ambient air temperature is 25°C; and
- (iii) in respect of an aeroplane with two seats, a passenger shall be carried for the flying trials.

2. The noise level required by paragraph 3 of this Part of this Schedule shall be measured in a level fly-over, at a point 150 metres vertically below the aeroplane.

3.—(1) An aeroplane specified in the 1st column of the following Table shall not, at the point referred to in paragraph 2 of this Part of this Schedule, exceed in the noise certification reference conditions the noise level specified in the 2nd column of that Table, as shown by flying trials.

TABLE

Number of Seats	Noise level in LAX at measurement point
1	80
2	84

(2) The necessary corrections shall be made where flying trials are carried out in conditions other than the noise certification reference conditions.

## PART VII

*Noise standards required for issue of a noise certificate to aeroplanes specified in article 6(12)(b)*

1. In this Part of this Schedule—

“the noise certification reference conditions” means conditions in which—

- (i) atmospheric pressure at sea level is 1013.25 millibars;
- (ii) ambient air temperature is 25°C; and
- (iii) in respect of an aeroplane with two seats, a passenger shall be carried for the flying trials.

2. The noise level required by paragraph 3 of this Part of this Schedule shall be measured in a level fly-over, at a point 150 metres vertically below the aeroplane.

3.—(1) An aeroplane specified in the 1st column of the following Table shall not, at the point referred to in paragraph 2 of this Part of this Schedule, exceed in the noise certification reference conditions the noise level specified in the 2nd column of that Table, as shown by flying trials.

TABLE

Number of Seats	Noise level in LAX at measurement point
1	76
2	80

(2) The necessary corrections shall be made where flying trials are carried out in conditions other than the noise certification reference conditions.

## PART VIII

*Noise standards required for issue of a noise certificate to helicopters specified in article 6(10)*

1. In this Part of this Schedule—

“the noise certification reference conditions” means conditions in which—

- (i) atmospheric pressure at sea level is 1013.25 millibars;
- (ii) ambient air temperature is 25°C;
- (iii) relative humidity is 70%;
- (iv) there is zero wind; and
- (v) the maximum take-off and landing weights of the helicopter are those at which noise certification is requested by the applicant for the certificate.

“Take-off reference procedure” means the procedure specified in BCAR;

“Overflight reference procedure” means the procedure specified in BCAR;

“Approach reference procedure” means the procedure specified in BCAR.

2. The noise levels required by paragraph 3 of this Part of this Schedule shall be measured at the following points—

(a) on take-off—

- (i) at a flight path reference point located on the ground vertically below the flight path defined in the take-off reference procedure

and 500 metres horizontally in the direction of flight from the point at which transition to climbing flight is initiated in the reference procedure;

- (ii) at two other points on the ground symmetrically disposed about the flight path defined in the take-off reference procedure and lying on a horizontal line through the flight path reference point at right angles to the direction of flight at a distance of 150 metres.

(b) on overflight—

- (i) at a flight path reference point located on the ground 150 metres vertically below the flight path defined in the overflight reference procedure;
- (ii) at two other points on the ground symmetrically disposed about the flight path defined in the approach reference procedure and lying on a horizontal line through the flight path reference point at right angles to the direction of flight at a distance of 150 metres.

(c) on approach—

- (i) at a flight path reference point located on the ground 120 metres vertically below the flight path defined in the approach reference procedure;
- (ii) at two other points on the ground symmetrically disposed about the flight path defined in the approach reference procedure and lying on a horizontal line through the flight path reference point at right angles to the direction of flight at a distance of 150 metres.

3.—(1) Subject to the provisions of paragraph 4 of this Part of this Schedule a helicopter having the maximum total weight authorised specified in the first column of the following Table shall not, at the points referred to at (a), (b) and (c) of paragraph 2 of this Part of this Schedule, exceed in the noise certification reference conditions the noise levels specified in relation to those points in the 2nd, 3rd and 4th columns of that Table, as shown by flying trials.

TABLE

Maximum total weight authorised of helicopter	Noise level in EPNdB		
	At point (a)	At point (b)	At point (c)
80,000 kg. or more	109	108	110
788 kg. or less	89	88	90

(2) Where the maximum total weight authorised of the helicopter is between the weights specified in the above Table, the noise levels which are not to be exceeded shall vary linearly according to the logarithm of the maximum total weight authorised of the helicopter.

(3) The necessary corrections shall be made where flying trials are carried out in conditions other than the noise certification reference conditions.

4. The noise levels specified in paragraph 3 of this Part of this Schedule may be exceeded at one or two of the measuring points specified in paragraph 2 if—

- (a) the sum of the excesses does not exceed 4 EPNdB;
- (b) at no measuring point is the excess greater than 3 EPNdB; and
- (c) any excesses are completely offset by reductions at the other measuring point or points.

## SCHEDULE 2

## Article 3

“An International Standard Atmosphere at sea level” means an atmosphere having the following characteristics—

- (a) the air is a perfect dry gas:
- (b) the physical constants are:
  - (i) sea level mean molecular weight:  
 $M_0 = 28.9644$
  - (ii) sea level atmospheric pressure:  
 $P_0 = 1013.250$  millibars  
 $= 1.013250 \times 10^5$  newtons  $m^{-2}$
  - (iii) sea level temperature:  
 $t_0 = 15^\circ C$   
 $T_0 = 288.15^\circ K$
  - (iv) sea level atmospheric density:  
 $\rho_0 = 1.2250$  kg  $m^{-3}$
  - (v) temperature of the ice point:  
 $T_i = 273.15^\circ K$
  - (vi) universal gas constant:  
 $R = 8.31432$  joules  $(^\circ K)^{-1} mol^{-1}$ .

## EXPLANATORY NOTE

*(This Note is not part of the Order.)*

This Order revokes and replaces the Air Navigation (Noise Certification) Order 1984. In addition to some minor and drafting amendments the following changes are made:—

(1) The application of the standards specified in Part II of Schedule 1 has been extended to propeller driven aeroplanes having a maximum total weight authorised of more than 5,700 kg. and which conform either to a prototype aeroplane in respect of which an application for a certificate of airworthiness was made on or after 1st January 1985 or conform to a modification of such a prototype aeroplane (article 6(7)).

(2) Noise certification requirements are extended to new types of helicopter and derived versions for which an application for a certificate of airworthiness for the prototype or for a modification of the prototype was made on or after 1st August 1986 (article 6(10)). Where there is no application for a certificate of airworthiness in respect of a prototype, as with civil derivatives of military helicopters, special provision is made (article 6(10)(c)).

(3) The maximum fines which may be imposed on summary conviction for a contravention of any of the provisions of the Order are increased (articles 14(3) and (4)).

The publications British Civil Airworthiness Requirements Section N—Noise Issue 2 and the CAA Blue Papers N810 and N835 referred to in article 3 can be purchased from the Civil Aviation Authority, Greville House, 37 Gratton Road, Cheltenham, Glos. GL50 2BN.

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