

SCHEDULE 5

Articles 28(7) and 39(2)

Radio communication and radio navigation equipment to be carried in aircraft

1. Subject to paragraph 2, every aircraft which must carry equipment specified in this Schedule must be provided, when flying in the circumstances specified in the first column of the Table in paragraph 3 of this Schedule, with the scales of equipment respectively indicated in the second column of that Table.

2.—(1) In the case of sub-paragraphs (1), (2), (3), (4), (5), (6), (7), (9)(d) and (10) of paragraph 3, the specified equipment need not be carried if the appropriate air traffic control unit permits flight to commence without that equipment and the aircraft complies with any instructions which the air traffic control unit may give in the particular case.

(2) An aircraft which is not a commercial air transport aeroplane or a public transport aircraft and which is flying in Class D or Class E airspace need not carry distance measuring equipment in accordance with paragraph (b) of Scale F when flying in the circumstances specified in sub-paragraph (1)(a) of paragraph 3.

(3) If an aircraft is flying in a combination of circumstances specified in the first column of the Table in paragraph 3 the scales of equipment are not on that account required to be duplicated.

3. Table

<i>Aircraft and Circumstances of Flight</i>	<i>Scale of Equipment Required</i>									
	A	B	C	D	E	F	G	H	I	J
(1) All aircraft (other than gliders and SLMGs) within the United Kingdom—										
(a) flying under Instrument Flight Rules within controlled airspace	A				E2	F				
(b) flying within controlled airspace	A									
(c) making an approach to landing at an aerodrome notified for the purpose of this sub-paragraph							G			
(d) flying within controlled airspace of Class A, B or C						E2				
(2) All aircraft within the United Kingdom—										
(a) flying at or above flight level 195	A									
(b) flying within airspace notified for the purpose of this sub-paragraph	A									
(3) All aircraft (other than gliders, SLMGs and balloons) within the United Kingdom flying for the purpose of public transport						E2				
(4) Before 6th April 2012, all gliders and SLMGs flying within the United Kingdom at or above flight level 195 except when flying within airspace notified as a Temporary Reserved Area-Gliding						E2				
(5) On and after 6th April 2012, all gliders and SLMGs within the United Kingdom—										

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<i>Aircraft and Circumstances of Flight</i>	<i>Scale of Equipment Required</i>			
(a) flying at or above flight level 100 except when flying within airspace notified for the purposes of this sub-paragraph	E2			
(b) flying under Instrument Flight Rules within controlled airspace	E2			
(c) flying within controlled airspace of Class A, B or C except when flying within airspace notified as a Temporary Reserved Area (Gliding)	E2			
(d) flying within airspace notified for the purposes of this sub-paragraph	E2			
(6) All aircraft (other than gliders and SLMGs) within the United Kingdom—				
(a) flying at or above flight level 245	E2 F			
(b) flying within airspace notified for the purpose of this sub-paragraph	E2			
(c) flying at or above flight level 100	E2			
(7) When flying under Instrument Flight Rules within airspace notified for the purposes of this paragraph—				
(a) all aeroplanes having a maximum take-off weight authorised of not more than 5700kg and a maximum cruising true airspeed capability of not more than 250 knots	E2			
(b) all rotorcraft	E2			
(c) all aeroplanes having either a maximum take-off weight authorised of more than 5700kg or a maximum cruising true airspeed capability of more than 250 knots	E3			
(8) All aircraft required to carry Scale E2 or E3	EE			
(9) All aircraft (other than gliders and SLMGs) registered in the United Kingdom, wherever they may be—				
(a) flying for the purpose of public transport under Instrument Flight Rules—				
(i) while making an approach to landing	A	C	D	H
(ii) on all other occasions	A	C		H
(b) multi-engined aircraft when flying for the purpose of public transport under Visual Flight Rules	A			H
(c) single-engined aircraft when flying for the purpose of public transport under Visual Flight Rules—				
(i) over a route on which navigation is effected solely by visual reference to landmarks	A			
(ii) on all other occasions	A	B		

<i>Aircraft and Circumstances of Flight</i>	<i>Scale of Equipment Required</i>
(d) flying under Instrument Flight Rules and not required to comply with paragraph (9)(a)	A
(10) All aircraft (other than gliders, SLMGs and balloons) registered in the United Kingdom, wherever they may be when flying for the purpose of public transport	E2
(11) All aeroplanes registered in the United Kingdom, wherever they may be, and all aeroplanes wherever registered when flying in the United Kingdom, powered by one or more turbine jets or turbine propeller engines and either having a maximum take-off weight of more than 15,000kg or with a maximum approved passenger seating configuration of more than 30	J
(12) All aeroplanes powered by one or more turbine jets or turbine propeller engines and either having a maximum take-off weight of more than 5700kg or a maximum approved passenger seating configuration of more than 19; and which are—	
(a) registered in the United Kingdom and flying for the purpose of public transport; or	J
(b) registered in the United Kingdom and flying within the airspace of the member states of the European Civil Aviation Conference; or	J
(c) flying in the United Kingdom	J

4. The scales of radio communication and radio navigation equipment indicated in the Table at paragraph 3 are as follows—

*Scale A*

Radio communication equipment capable of maintaining direct two-way communication with the appropriate air traffic control units on the intended route using the frequencies notified or otherwise designated by the competent authority for that purpose.

*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 communication 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 E2(1)*

(1) Scale E1 was formerly defined as secondary surveillance radar equipment which includes a pressure altitude reporting transponder capable of operating in Mode A and Mode C and capable of being operated in accordance with such instructions

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Secondary surveillance radar equipment which includes a pressure altitude reporting transponder capable of operating in Mode A and Mode C and has the capability and functionality prescribed for Mode S Elementary Surveillance and is capable of being operated in accordance with such instructions as may be given to the aircraft by the air traffic control unit.

*Scale E3*

Secondary surveillance radar equipment which includes a pressure altitude reporting transponder capable of operating in Mode A and Mode C and has the capability and functionality prescribed for Mode S Enhanced Surveillance and is capable of being operated in accordance with such instructions as may be given to the aircraft by the air traffic control unit.

*Scale EE*

The aircraft must, in the circumstances specified in paragraph 2.1.5.3 of Volume IV (Fourth Edition July 2007) of Annex 10 to the Chicago Convention, comply with the requirements for antenna diversity set out in that paragraph.

*Scale F*

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

- (a) automatic direction finding equipment;
- (b) distance measuring equipment; and
- (c) 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*

- (1) Subject to paragraphs (2) and (3), 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.
- (2) An aircraft may fly notwithstanding that it does not carry the equipment specified in this Scale if it carries alternative radio navigation equipment or navigational equipment approved in accordance with article 37(9).
- (3) Where only 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—
  - (a) it is not reasonably practicable for the repair or replacement of that item to be carried out before the beginning of the flight;
  - (b) the aircraft has not made more than one flight since the item was last serviceable; and
  - (c) the commander of the aircraft is satisfied that the flight can be made safely and in accordance with any relevant requirements of the appropriate air traffic control unit, taking into account the latest information available as to the route and aerodrome

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as may be given to the aircraft by the air traffic control unit. There is no longer any requirement to carry Scale E1 but some aircraft may continue to carry it under a transitional exemption issued by the CAA.

to be used (including any planned diversion) and the weather conditions likely to be encountered.

*Scale J*

An airborne collision avoidance system.

**5.** In this Schedule—

- (a) “Airborne collision avoidance system” means an aeroplane system which—
  - (i) conforms to requirements prescribed for the purpose;
  - (ii) is based on secondary surveillance radar transponder signals;
  - (iii) operates independently of ground based equipment; and
  - (iv) is designed to provide advice and appropriate avoidance manoeuvres to the pilot in relation to other aeroplanes which are equipped with secondary surveillance radar and are in undue proximity;
- (b) “Automatic direction finding equipment” means radio navigation equipment which automatically indicates the bearing of any radio station transmitting the signals received by such equipment;
- (c) “Distance measuring equipment” means radio equipment capable of providing a continuous indication of the aircraft’s distance from the appropriate aeronautical radio stations;
- (d) “Mode A” means replying to an interrogation from secondary surveillance radar units on the surface to elicit transponder replies for identity and surveillance with identity provided in the form of a four digit identity code;
- (e) “Mode C” means replying to an interrogation from secondary surveillance radar units on the surface to elicit transponder replies for automatic pressure-altitude transmission and surveillance;
- (f) “Secondary surveillance radar equipment” means such type of radio equipment as may be notified as being capable of—
  - (i) replying to an interrogation from secondary surveillance radar units on the surface; and
  - (ii) being operated in accordance with such instructions as may be given to the aircraft by the appropriate air traffic control unit;
- (g) “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 omni-directional radio ranges.