

Operational and emergency equipment to be carried on board Isle of Man registered aeroplanes

When an aeroplane is certificated by the State of Design, the design requirements stipulate only minimal equipment that should be installed. Prior to operating the aeroplane, the owner/operator is required to decide how and where the aeroplane will operate and based upon this information decide what operational and emergency equipment should be carried. In the majority of cases, the manufacture of the aeroplane and installation of equipment is carried out in parallel so that at the point of delivery, all required equipment is on board.

The following information is provided to assist the owner/operator to locate the equipment requirements within the Air Navigation (Isle of Man) Order 2015 as amended (ANO) and determine what equipment must be carried for the operation of their aeroplane. **The ANO shall be used as the definitive source and for full details of equipment to be carried and in what circumstances of flight**, please refer to Part 4, Equipment of Aircraft, Schedule 3 Aircraft Equipment (and reference Article 24(6) and 32(2)) and Schedule 4 Radio Communication and Radio Navigation Equipment of Aircraft (and reference Article 34).

The following tables include the Items of Equipment required by the ANO legislation, the relevant equipment scales (and page numbers), the page number to the relevant circumstances of flight, and where appropriate additional comments to assist the operator as to whether the equipment item is applicable and any specific IOM national requirements that are required when preparing and/or amending a Minimum Equipment List (MEL).

Notes:

- 1. If the aeroplane is flying in a combination of circumstances, the scales of equipment do not need to be duplicated.*
- 2. In the Schedule "day" means the time from half an hour before sunrise until half an hour after sunset (both times exclusive), sunset and sunrise being determined at surface level.*
- 3. Some of the items of equipment do not need to be of a type approved by the IOMAR; these items can be found in the ANO, Schedule 3 Aircraft Equipment, paragraph 3;*
- 4. This document is meant as a guide and is not exhaustive, there are exceptions and additions to the contents of this document for amphibious and acrobatic aircraft, please refer to the ANO for further details.*

Schedule 3 – Aircraft Equipment for M- Registered Aeroplanes

The page numbers referred to in this document relate to the 'CONSOLIDATED' version of the ANO (IOM) 2015 as amended. Therefore, please cross reference the page numbers listed in the tables with the [Consolidated Air Navigation \(Isle of Man\) Order 2015 as amended \(ANO\)](#).

Item of equipment	ANO Scale	Page reference for Circumstances of flight and Scale	Comment	MEL National Requirements as applicable to IOM Registered Aeroplanes	
				deferment period and/or conditions	required distribution
Spare fuses	A(1)	Page 148 Page 157	Required on aircraft fitted with fuses that are accessible in flight		
Maps, charts and codes	A(2)	Page 148 Page 157	Required on all flights		
Accessible medical supplies	A(3)	Page 148 Page 157	Required on all flights		Accessible medical supplies comprising one or more first aid kits appropriate to the number of passengers the aeroplane is authorised to carry; the contents of the first aid kit(s) to be determined by the operator having due regard to the nature of the operation
Hand fire extinguisher	A(4)	Page 148 Page 157	Required on all flights		One hand fire extinguisher in the flight crew compartment and in each passenger compartment separate from flight crew compartment except if passenger compartment is readily accessible to flight crew

Item of equipment	ANO Scale	Page reference for Circumstances of flight and Scale	Comment	MEL National Requirements as applicable to IOM Registered Aeroplanes	
				deferment period and/or conditions	required distribution
Altitude alerting system	AA	Page 153 Page 157	Required on all jet or turboprop aeroplanes with MTOM over 5700 kg		
Safety belt, safety belt with diagonal shoulder strap, safety harness, child restraint device	B	Page 148 Page 157/158	B(1) to B(6) inclusive are required on all flights		
Lighting equipment for displaying lights, electrical equipment for illumination	C	Page 148 Page 158	Required for night flights		
Slip indicator, turn indicator, gyroscopic bank & pitch indicator, gyroscopic direction indicator, sensitive pressure altimeter, magnetic heading equipment	D	Page 148 Page 158/159	Required for night flights & Required when flying IFR outside of controlled airspace		
Slip indicator, turn indicator, gyroscopic bank & pitch indicator, gyroscopic direction indicator, sensitive pressure altimeter	E	Page 148 Page 159	Required when flying IFR inside controlled airspace (refer to page 149 for further details)		
Timepiece, equipment to manage power supply to gyroscopic instrument, Rate of climb and descent indicator, equipment to calibrate outside air temperature, airspeed indicators	F	Page 148 Page 159	Required when flying IFR inside controlled airspace (refer to page 149 for further details)		

Item of equipment	ANO Scale	Page reference for Circumstances of flight and Scale	Comment	MEL National Requirements as applicable to IOM Registered Aeroplanes	
				deferment period and/or conditions	required distribution
Landing lights, electrical lighting system for illumination, electric torch, parachute flares, equipment to observe existence and build-up of ice on aircraft	G	Page 148 Page 160	G(2) and (3) are required for night flights		
Landing light	GG	Page 148 Page 161	Required for night flights		
Lifejacket(s)	H	Page 148 Page 161	Required when flying over water beyond gliding distance from land suitable for an emergency landing & at a greater distance from land suitable for making an emergency landing than that corresponding to 30 minutes at cruising speed or 100 nautical miles, whichever is the less	A lifejacket equipped with a whistle and survivor locator light for each person on board <i>and children's life jackets constructed for children less than 3 years old need not be equipped with a whistle</i>	A lifejacket equipped with a whistle and light for each person on board readily accessible to each persons
Life rafts and life raft equipment	K	Page 148 Page 162/163	Required when flying over water at a greater distance from land suitable for making an emergency landing than that corresponding to 30 minutes at cruising speed or 100 nautical miles, whichever is the less		Sufficient life rafts to accommodate all persons on board which are accessible and available.

Item of equipment	ANO Scale	Page reference for Circumstances of flight and Scale	Comment	MEL National Requirements as applicable to IOM Registered Aeroplanes	
				deferment period and/or conditions	required distribution
Emergency Locator Transmitter (ELT)- (<i>survival ELT - automatic ELT</i>)	KK	Page 148 Page 163	Required when: flying over water at a distance of more than 10 minutes flying time at normal cruising speed away from land suitable for making an emergency landing* and/or flying over areas designated by the State as especially difficult for search and rescue* (*refer to page 149 for details)	Automatic ELT: May be inoperative for a maximum of 6 flights or 25 flight hours, whichever occurs first.	
Oxygen, portable oxygen supply and associated apparatus	L1 or L2	Page 148 Page 163 – 168	Required when flying at a height of 13,000ft or more above mean sea level		Note: for operation above FL 350 ANO Scale LI Part 1 includes requirement for therapeutic oxygen in a portable container or by an alternative method, together with suitable and sufficient apparatus to enable use of the oxygen for first aid treatment
Ice formation prevention equipment	M	Page 149 Page 169	Required when weather reports or forecasts available at the aerodrome at the time of departure indicate that conditions favouring ice formation are likely to be met		
Radar set for warning of potentially hazardous weather conditions	O	Page 149 Page 169	Required when flying in a pressurised aeroplane operating in areas where thunderstorms or other potentially hazardous weather conditions are likely to be encountered.		

Item of equipment	ANO Scale	Page reference for Circumstances of flight and Scale	Comment	MEL National Requirements as applicable to IOM Registered Aeroplanes	
				deferment period and/or conditions	required distribution
Four channel cockpit voice recorder, flight data recorder, combined cockpit voice recorder/flight data recorder	P & S	Page 149/150 Page 169 – 172	CVR and FDR requirements are related to the MTOM and engine type of the aeroplane.	Cockpit Voice Recorder: May be inoperative provided: <ul style="list-style-type: none"> (a) The aircraft does not exceed 8 further consecutive flights with the cockpit voice recorder inoperative, and (b) A maximum of 72 hours have elapsed since the cockpit voice recorder was found to be inoperative, and, (c) Any Flight Data Recorder required to be carried is operative. 	
				Flight Data Recorder: May be inoperative provided: <ul style="list-style-type: none"> (a) The aircraft does not exceed 8 further consecutive flights with the FDR inoperative, and (b) A maximum of 72 hours have elapsed since the FDR was found to be inoperative, and (c) Any Cockpit Voice Recorder required to be carried is operative. 	
				Flight Data and Cockpit Voice Combination Recorder: Flight data recorder and/or cockpit voice recorder function may be inoperative provided: <ul style="list-style-type: none"> (a) The other function, where required, is operative, (b) The aircraft does not exceed 8 further consecutive flights with the inoperative function, and (c) A maximum of 72 hours have elapsed since the inoperative function was found. 	
Eye, nose and mouth protection equipment/portable equipment for flight & cabin crew (PBE)	R	Page 148 Page 170/171	Required when flying in a pressurised aeroplane. <ul style="list-style-type: none"> - R(1) applicable to aircraft with a MTOM over 5,700kg and flight crew only. - R(2) applicable to aircraft with a MTOM of 5,700 kg or less. - R(3) applicable to aircraft with a MTOM over 5,700kg for which cabin crew must be carried. 		Protective (Portable) Breathing Equipment should be readily accessible to the crew member(s).

Item of equipment	ANO Scale	Page reference for Circumstances of flight and Scale	Comment	MEL National Requirements as applicable to IOM Registered Aeroplanes	
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Underwater sonar location device	T	Page 151 Page 174	Applicable to aeroplanes with a MTOM greater than 27,000 kg (with some exceptions)		
Survival equipment, clothing and rations – tropical conditions	U	Page 148 Page 175	Required when flying over areas designated as especially difficult for search and rescue where in an emergency landing, tropical conditions are likely to be met (except U(1))		
Survival equipment, clothing and rations – polar conditions	V	Page 148 Page 175	Flying over areas designated as especially difficult for search and rescue where in an emergency landing, polar conditions are likely to be met (except V(1))		
Cosmic radiation detection equipment	W	Page 149 Page 175/176	Required when flying at an altitude of more than 49,000 ft		
Terrain Awareness and Warning System (TAWS)	X	Page 151 Page 176	Required on all flights of large and turbo jet aeroplanes - MTOM over 5700 kg; - Seating capacity more than 9; or - Powered by one or more jet or turboprop engine(s).		
Emergency lighting systems	Z	Page 152 Page 176	Required when at night and MTOM over 5,700 kg, or, With passenger seating capacity over 19.		

Schedule 4 – Radio Communication and Navigation Equipment for M- Registered Aeroplanes

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Item of Equipment	ANO Scale	Page references for Circumstances of flight and Scale	Comment	MEL National Requirements as applicable to IOM Registered Aeroplanes	
				deferment period and/or conditions	required distribution
Radio communication equipment	A	Page 178/179 Page 180			
Radio navigation equipment	D and G	Page 178/179 Page 180/181			
Secondary surveillance radar equipment including a pressure altitude reporting transponder	E2 and E3	Page 178/179 Page 180			
Antenna (diversity)	EE	Page 179 Page 180			
Radio communication and radio navigation equipment including distance measuring equipment (DME) and VHF omni-range (VOR) equipment	F	Page 178 Page 180			
Distance measuring equipment (DME), duplicated VHF omni-range (VOR) equipment, 75 MHz marker beacon receiver	H	Page 179 Page 181			
Airborne collision avoidance system	J	Page 179 Page 181/182			