

ANNEX A
TO TAA ADVISORY 2021-01
DATED 6 MAY 2021
REVISED 22 MAY 2024

Examples of surveillance equipage requirements by select ICAO member States

ICAO Member State	Surveillance Equipage Requirements (as of TAA Advisory publication date)		
	Mode A and C	Mode S	ADS-B Out
Canada	Transponder Airspace defined in CAR 601.03.	No current airspace requirement. However, aircraft required to meet TCAS requirements must be equipped with a Mode S Transponder. See Transport Canada, Civil Aviation (TCCA) AC 700-004 (advisory reference 3.2.2.e).	On 10 August 2023, NAV CANADA has issued AIC 17/23, with a notice of updated timeline for the ADS-B Out mandate in Canada. The effective date for the mandated Space-based ADS-B Out Implementation for Class A airspace was 10 August 2023, to be closely followed by the Class B airspace, and Classes C, D and E thereafter, in a phased approach implementation. Issue 303 of the Designated Airspace Handbook identifies ADS-B transponder airspace as Class A, effective 10 August 2023. However, according to the definition of ADS-B Out transponder airspace in the Handbook, State aircraft are exempted.
United States	FAA 14 CFR 91.215 lists the airspace in which Mode A and C transponders are required for users.	No current airspace requirement. However, aircraft required to meet TCAS requirements must be equipped with a Mode S Transponder. See also FAA 14 CFR 129.18 – <i>Collision avoidance system</i> applicable to foreign air carriers.	FAA 14 CFR 91.225 (advisory reference 3.2.2.j) defines which airspace requires ADS-B Out. FAA 14 CFR 91.227 (advisory reference 3.2.2.k) defines ADS-B Out equipment performance requirements. Military fleets operating in this airspace require ADS-B Out, unless exempted (advisory reference 3.2.2.i). Note: <i>There are two possible ADS-B implementations in the U.S.: 1090 Extended Squitter (ES) and Universal Access Transceiver (UAT). UAT is only recognized in the U.S. airspace, and only for operations at, or below, 18,000 ft. Due to UATs' limited use, and since the Canadian ADS-B Out implementation will likely be space-based, installation of UATs is not recommended.</i>

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ICAO Member State	Surveillance Equipage Requirements (as of TAA Advisory publication date)		
	Mode A and C	Mode S	ADS-B Out
Countries within the European Union	The European regulation is captured in the Commission Implementing Regulation (EU) No. 1207/2011, Brussels: Official Journal of the European Union, 2011, as amended by EU 2020/587, 2020 (advisory reference 3.2.2.d).	The European regulation is captured in Commission Implementing Regulation (EU) No 1207/2011, Brussels: Official Journal of the European Union, 2011 as amended by EU 2020/587, 2020 (advisory reference 3.2.2.d). Implementation dates, affected operators, and acceptable equipment are identified in the Regulation.	The European regulation is captured in Commission Implementing Regulation (EU) No. 1207/2011, Brussels: Official Journal of the European Union, 2011 as amended by EU 2020/587, 2020 (advisory reference 3.2.2.d). Implementation dates, affected operators, and acceptable equipment are identified in the Regulation.
Other	If an ICAO member state has implemented Mode A and C transponder airspace, then meeting Canadian, U.S. or European Mode A and C requirements should suffice.	If an ICAO member state has implemented Mode S transponder airspace, then meeting the European Mode S requirements should suffice. A careful assessment of which parameters are required may be necessary.	There is limited ADS-B Out implementation or harmonization of requirements amongst ICAO member states worldwide. However, meeting the requirements applicable to U.S., Canadian and European airspace is expected to be adequate for operation in ICAO member states. It is strongly recommended that the Applicant consult the Aeronautical Information Publication (AIP) of the respective ICAO member state to confirm requirements.