



**AIRWORTHINESS**

**ADVISORY**

**CIRCULAR**

CIVIL AVIATION AUTHORITY OF BOTSWANA

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CAAB Document AAC-015

**AIRCRAFT EQUIPMENT  
PERFORMANCE STANDARDS AND  
INSTALLATION CRITERIA**

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## 1. PURPOSE

This Airworthiness Advisory Circular (AAC) provides information and guidance and serves as acceptable means of compliance with aircraft equipment and instruments installation and certification requirements specified in the Civil Aviation (Equipment and Instrument Regulations).

## 2. STATUS OF THIS ADVISORY CIRCULAR

This AAC is an original issuance.

## 3. EFFECTIVE DATE

This AAC becomes effective immediately.

## 4. APPLICABILITY

This AAC is applicable to all aircraft.

## 5. RELATED REGULATIONS

*Copies may be obtained from the Government Printer.*

- Civil Aviation (Equipment and Instruments) Regulations, 2013: Regulations 3 and 4.
- Civil Aviation (Airworthiness) Regulations
- Civil Aviation (Air Operator Certification and Administration) Regulations, 2013
- Civil Aviation (Aircraft Operations) Regulations

## 6. RELATED PUBLICATIONS

*Copies may be obtained from Document Sales Unit, ICAO, 999 University Street, Montreal, Quebec, Canada H3C 5H7.*

- ICAO Annex 6
- ICAO Annex 8

## 7. DEFINITIONS AND ACRONYMS

7.1 The following definitions are used in this circular

**Authority** means the CAAB, unless otherwise specified.

**Type Certificate** means a certificate issued by a State of Design to define an aircraft type design and to certify that this design meets the appropriate airworthiness requirements of that State.

7.2 The following acronyms are used in this circular

<b>AAC</b>	Airworthiness Advisory Circular
<b>AC</b>	Advisory Circular
<b>ACAS</b>	Airborne Collision Avoidance System
<b>CAAB</b>	Civil Aviation Authority of Botswana
<b>CARs</b>	(Botswana) Civil Aviation Regulations
<b>CVR</b>	Cockpit Voice Recorder
<b>EASA</b>	European Aviation Safety Agency

*Advisory Circulars (ACs) are intended to provide advice and guidance to illustrate an acceptable means, but not necessarily the only means, of complying with the regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material. Where a regulation contains the words "prescribed by the Authority," the AC may be considered to prescribe a viable method of compliance, but status of that "prescription" is always "guidance" (never regulation).*

<b>ELT</b>	Emergency Locator Transmitter
<b>ETSO</b>	Equipment Technical Standards Order
<b>EUROCAE</b>	European Organization for Civil Aviation Equipment
<b>FAA</b>	Federal Aviation Administration (United States of America)
<b>FDR</b>	Flight Data Recorder
<b>GPWS</b>	Ground Proximity Warning System
<b>ICAO</b>	International Civil Aviation Organization
<b>JAA</b>	Joint Aviation Administration
<b>MOPS</b>	Minimum Operational Performance Specifications
<b>STC</b>	Supplemental Type Certificate
<b>TAWS</b>	Terrain Awareness Warning System
<b>TC</b>	Type Certificate
<b>TSO</b>	Technical Standard Order


## **8. BACKGROUND**

Regulation 3 of the Civil Aviation (Equipment and Instruments) Regulations, 2013 requires any person who flies an aircraft to ensure that the aircraft is equipped with equipment and instruments specified in the Equipment and Instruments Regulations. The Regulation further requires all required equipment and instruments to be approved and installed in accordance with applicable airworthiness requirements specified under the Civil Aviation (Airworthiness) Regulations.

## **9. REQUIRED SPECIFICATIONS**

- 9.1 The table in the next page lists the applicable operational Equipment TSO (or ETSO) performance standards and the installation criteria as most of the installations will be made by the TC holder or the STC holder to FAA or EASA/JAA standards. These are generally quoted.
- 9.2 If the Applicant or CAAB inspector is unsure as to what the equipment installation complies with they should request that the applicant obtains a statement from the TC or STC holder as applicable.

System	Equipment Minimum Operational Performance Specification	Installation Criteria
CVR	FAA TSC C123( ) or EASA ETSO C123( )	EUROCAE ED-112 (Minimum Operational Performance Specifications (MOPS) for Crash Protected Airborne Recorder Systems)
FDR	FAA TSC C124( ) or EASA ETSO C124( )	EUROCAE ED-112 (Minimum Operational Performance Specifications (MOPS) for Crash Protected Airborne Recorder Systems)
ELT	FAA TSO C91a (now obsolete) or, EASA ETSO 2C91a (for 121.5 MHz and 243.0 MHz ELT ), or FAA TSO C126/ EASA 2C126( ) (for 406 MHz)	Basic TC Certification basis.  FAA AC91-44 exists dealing with operation and maintenance of ELTs.
GPWS inc Forward Looking Terrain Function (TAWS Class A)	FAA TSO C151 ( ) or EASA ETSO TSO C151( ) - Class A	FAA AC25-23 or JAA TGL 12
ACAS	FAA TSO C119c or EASA ETSO C119c to meet latest ICAO Annex 10	FAA AC20-131A, FAA AC20-151, JAA TGL 8 Rev 1, or EASA AMC20-15

  
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 For **Civil Aviation Authority of Botswana**



*End of Advisory Circular*





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