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## Acoustics — Unattended monitoring of aircraft sound in the vicinity of airports

*Acoustique — Surveillance automatique du bruit des aéronefs au voisinage des aéroports*



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## Contents

Page

Foreword .....	iv
Introduction.....	v
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	2
4 Data acquisition .....	7
4.1 Instruments and equipment .....	7
4.2 Microphone mounting.....	7
4.3 Preferred measured quantities .....	9
4.4 Time stamp.....	10
4.5 Aircraft sound event detection and classification .....	10
4.6 Measurement range.....	11
4.7 Transmission of data .....	11
4.8 Acoustical calibration and verification .....	11
4.9 Environmental characteristics .....	13
4.10 Measurement of meteorological conditions .....	14
5 Data processing.....	14
5.1 General .....	14
5.2 Basic requirements .....	14
5.3 Aircraft sound event data .....	15
5.4 Event identification .....	17
5.5 Incomplete or corrupted data.....	17
5.6 Total sound and residual sound .....	18
5.7 Data storage .....	18
6 Measurement uncertainty .....	19
7 Reporting of data .....	19
7.1 General .....	19
7.2 Reporting of aircraft sound event data .....	19
7.3 Environmental reports .....	21
8 Instruction manual .....	21
Annex A (informative) Selection of sites for sound monitors .....	23
Annex B (informative) Uncertainty of reported data .....	27
Bibliography.....	36

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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ISO 20906 was prepared by Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 1, *Noise*.

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## Introduction

This International Standard specifies requirements for reliable measurements of aircraft sound.

This International Standard describes a threshold system of sound event recognition in a complex sound situation with multiple aircraft and other sound sources. A much more complex and sophisticated system may be needed to separate the aircraft sound events from each other and from other sound sources. Such methods — which may include radar location of sources, the addition of flight information systems, directional microphones, and other methods such as distribution of specific and residual sound or pattern recognition — are not described in this International Standard.

For political reasons, it is often necessary to install sound monitors in acoustically unsuitable places. For these situations, the operator of the sound-monitoring system should be aware of a potentially substantial increase of uncertainty in the results, as discussed in Annex B. In extreme situations, the uncertainty may become so large as to make an aircraft sound measurement meaningless.

Sound monitors installed in areas with usually low aircraft sound may be deployed to document noise levels where potential future airport operations might be considered: such sound monitors have to show that there is normally only low aircraft sound and hence no measured aircraft sound events — except in the case of extraordinary circumstances when an aircraft flies close to the sound monitor. Such sound monitors may be politically necessary.