



Legislation and standards

Ampetronic™ Hearing Loops

AMPETRONIC®

Listen to the difference

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Legislation

15 percent of the population suffer hearing loss, one in four of those use a hearing aid. To ensure hearing aid users have access to suitable assistive listening technologies, many countries have developed legislation, and adopted standards, specifying acceptable access levels, and how well the chosen systems should perform.

Ampetronic™ Hearing Loop systems help to safeguard the rights of people who experience hearing loss, also known as **disability access**. If used correctly such standards consistently meet or exceed **performance standards** set out by the International Electrotechnical Commission (IEC).

Disability access

Following The Universal Declaration of Human Rights, adopted by the United Nations (UN) General Assembly on 10 December 1948, the UN developed the 'UN Convention on the Rights of People with Disabilities' CRPD 2006. CRPD is an international agreement protecting and promoting human rights of disabled people throughout the world. This agreement recognises that everyone is of equal value, has the right to make their own decisions, and should be treated with fairness, dignity, and respect. This convention describes steps which governments must take, to ensure disabled people enjoy equal human rights, including:

- equality before the law without discrimination
- an inclusive education and a decent standard of living
- support to participate in society and live in the community
- accessible physical environments and information

The UN convention has resulted in many countries developing their own legislation, specifying how the rights of people with disabilities will be protected. More recently in Europe, the European Economic and Social Committee have developed a Directive on the European Accessibility Act 2016.

For people utilising assistive listening technologies, and loops in particular, protection is typically in the form of anti-discrimination laws and building regulations. A summary of relevant legislation by country can be seen on pages six and seven of this brochure.

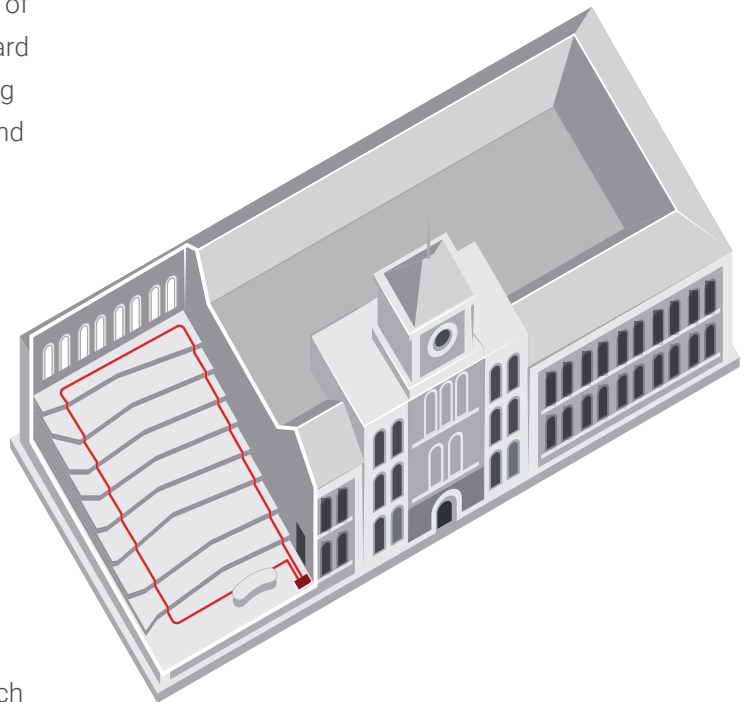


Performance standards

Performance standards

In addition to access legislation guaranteeing the availability of assistive listening solutions, the International Electrotechnical Commission (IEC) has developed a set of criteria which specifies the minimum acceptable standard at which any system should perform. In terms of hearing loops, the criteria are set out in standard IEC-60118-4 and include:

- **low magnetic background noise**
for intelligibility and comfort
- **correct field strength**
setting a suitable signal level
- **even field strength**
for consistency of signal
- **flat frequency response**
essential to maintain intelligibility



The IEC have also published IEC 62489-1 standard, which stipulates how performance of an amplifier is measured. Always purchase amplifiers that are IEC 62489-1 compliant.

At Ampetronic™ we believe the following criteria are also essential for delivering acceptable system performance:

- **input audio to separate signal from noise**
- **acceptable coverage**
- **clear signage, no user request necessary**
- **training, monitoring, maintenance**

Facility operators can find themselves in an actionable position, if there is no service provision that is of a genuine benefit to users. Installation must be fit for purpose. Measurable performance of a hearing loop system is defined, in international standard IEC 60118-4.

Signage

Hearing loops provide an important service for hearing aid users and others with challenging levels of hearing loss in many environments, and applications however, they are ineffective if the hearing aid user is unaware of the facility available to them.

Hearing loop systems are, in effect, invisible and inaudible to potential users. It is important therefore that necessary signage is displayed for users to know to switch their hearing aid to correct setting, or ask for a receiver.

There is an internationally recognised hearing loop sign, consisting of an ear graphic with a letter 'T' and brief instructions for those unfamiliar with this technology.



Signage requirements vary dependent on country and application. Although, there is no globally recognised standard for signage, some countries include a signage recommendation in their disability access legislation. For related examples see The Americans with Disabilities Act of 1990 (ADA) and ADA Amendments Act of 2008. The following table is a good guide to what is both suitable and necessary:

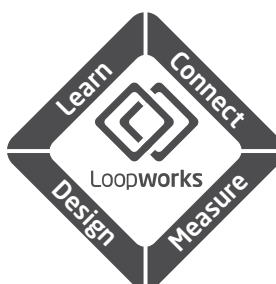
Signage recommendations	
Application	Recommended signage requirement
Room area coverage system for example cinema theatres, waiting areas, classrooms, meeting rooms, conference halls, museums.	A sign or window sticker at average eye height to each entry point to the space on a door is perfect. At least one large sign at a visible point on a wall, within looped space. Note: if loop does not cover entire area, then a map of the coverage area should be available at each entry point.
Local area service point system, such as service point, reception desks	A sign displayed on the counter, or as close as possible, at a level that cannot be obscured by anyone standing at service point.
Intercoms and automated audio assistance message systems including entry points	A small sign at a level where it is visible to the person pressing 'intercom', 'information' or 'help' button

Legislation and building regulations

Disability access legislation				
Region	Country	Access Legislation	*CRPD	Building regulations
Europe	Austria	Federal Disability Discrimination Act	X	
	Belgium	2007 Anti-Discrimination Law	X	
	Czech Republic	Charter of Fundamental Rights and Freedoms Articles 29, 30	X	Building and Planning Act No. 83 of 1998
	Denmark	"Danish Consolidated Act No. 164 of March 12, 2003 on Copyright (Article 17); 1993 Parliamentary Resolution Concerning Equalisation of Opportunities for Disabled People and Non-Disabled People"	X	
	Estonia	Constitution Article 28	X	Economic Affairs and Communications Minister Regulation No. 14 (11/28/2002)
	Finland	Constitution (2000)	X	
	France	Code Penal – extracts and Code du Travail – extracts	X	
	Germany	Constitution (1949, amendments to 1998); Disability Discrimination Act (BGG); SGB IX (Law on Rehabilitation and Participation of Disabled People)	X	
	Greece	Constitution Article 21	X	
	Ireland	Act on the Affairs of People with Disabilities No. 59/1992	X	
	Italy	The Constitution of the Italian Republic, Article 38; Law 104/1992 (Framework Law for the Assistance, Social Integration and Rights of Disabled People)	X	
	The Netherlands	Act on Equal Treatment on the Grounds of Handicap or Chronic Illness (2003)	X	
	Norway	Norwegian Plan for the Inclusion of Persons with Disabilities in Development Cooperation, prepared by the Ministry for Foreign Affairs	X	
	Poland	Constitution Article 69; The Charter of Rights of Disabled People (1997)	X	
	Portugal	Law 38/2004 of August 18 (General Legal Basis of Prevention, Enable, Rehabilitation, and Participation of People with Disabilities)	X	Law 163 of 8 August 2006 (Accessibility in Construction)
	Russian Federation	Constitution of the Russian Federation, Article 39; The Federal Law on social services for older citizens and citizens with disabilities of 2 August 1995, No. 122.; The Federal Law on social protection for persons with disabilities in the Russian Federation of 24 November 1995, No. 181.	X	
	Scotland	Disability Discrimination Act 1995 (c. 50); Disability Discrimination (Services and Premises) Regulations 1996; Disability Rights Commission Act 1999 (c. 17)	-	
	Slovenia	Constitution Articles 14, 50, 52; Action Program for the Disabled 2007-2013	X	
	Spain	Ley 51/2003 – de igualdad oportunidades, no discriminación y accesibilidad universal de las personas con discapacidad	X	
	Sweden	Constitution Article 2; 2008 Discrimination Act (SFS 2008:567); Act Concerning Support and Service for Persons with Certain Functional Impairments, SFS 1993: 387	X	
Turkey	Türkiye Cumhuriyeti Anayasası (Constitution of Turkey); Law 5378 (Law on Disabled People); Turkish Disability Act	X		
United Kingdom	UK Equality Act 2010	X	The Building Regulations 2010(12); British Standards 8300 – Code of Practise	

*CRPD = United Nations Convention on the Rights of People with Disabilities (CRPD 2006)

Training videos and product demonstrations can be viewed online at the **Ampetronic™ YouTube Channel**
<https://www.youtube.com/user/AmpetronicLoops>



Ampetronic™ Loopworks™ productivity suite includes a powerful measurement app, and comprehensive specification and design tools. Such tools can stand alone, when used in combination provide a holistic end-to-end solution to a hearing loop project, which can save time and money.

Disability access legislation				
Region	Country	Access Legislation	*CRPD	Building regulations
Africa	South Africa	Constitution – Bill of Rights (1996)	X	
Asia	China	"Regulations on the Employment of People with Disabilities (2007); Law of the People's Republic of China on the Protection of Persons with Disabilities (2008)"	X	
	Hong Kong	"Ordinance on Disability, c. 487 (1990) Disability Discrimination Ordinance (1995)"	-	
	Japan	"Law to Promote the Elimination of Discrimination Based on Disability (June 19, 2013); Act for Research, Development, and Dissemination of Assistive Devices (1993); The Act on Buildings Accessible and Usable for the Elderly and Physically Disabled (June, 1994)"	X	
	Singapore	1990 Barrier Free Accessibility Code	X	
	Taiwan	People with Disabilities Rights Protection Act 1980	-	
India	India	Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995 (no. 1 of 1996)	X	
	Sri Lanka	Protection of the Rights of Persons with Disabilities (1996, amended 2003)	X	
Middle East	Bahrain	Constitution Article 5	X	
	Dubai	Dubai Universal Design Code Feb 2017 1st edition		
	Egypt	2012 Constitution Articles 70, 72	X	
	Israel	Equal Rights for People with Disabilities Law, 5758–1998	X	
	Kuwait	Law No. 8 of 2010 for the Rights of People with Disabilities	X	
	Saudi Arabia	Constitution, Article 27	X	
	United Arab Emirates	CRPD	X	
North America	Canada	Constitution – Charter of Rights and Freedoms (1982); Human Rights Act; Employment Equity Act	X	
	United States of America	The Americans with Disabilities Act of 1990 (ADA); ADA Amendments Act of 2008; Individuals with Disabilities Education Act (IDEA); Section 504 of the Rehabilitation Act of 1973	X	2015 International Building Code
Oceania	Australia	Disability Discrimination Act 1992; Disability Services Act, 1986; Disability Services Amendment (Improved Quality Assurance) Act, 2002	X	AS 1428.5-2010 Design for access and mobility ; NCC 2016 Building Code of Australia
	New Zealand	Human Rights Amendment Bill of 2001; Health and Disability Services (Safety) Act 2001; New Zealand Public Health and Disability Act 2001	X	
South America	Argentina	Law 25280 – Inter-American Convention for the Elimination of all Forms of Discrimination against Persons with Disabilities; Law 24657 – Federal Disability Council	X	
	Brazil	Decree 7037/2009 (National Human Rights); Decree 3298/99 – National Policy for the Integration of Persons with Disabilities, Consolidates protection Standards, and Other Measures	X	
	Mexico	Ley General Para La Inclusión de las Personas con Discapacidad (General Act on the Inclusion of People with Disabilities)	X	
	Peru	Peru Law No. 29973, General Law On Persons With Disabilities;	X	

*CRPD = United Nations Convention on the Rights of People with Disabilities (CRPD 2006)

For more information on assistive listening systems, hearing loops, and meeting regulatory standards for hearing loop installations, contact our friendly and knowledgeable team on:

UK: (01636) 602160, outside UK: +44 (0) 1636 602161
or email: sales@ampetronic.co



Providing a genuine benefit.

To find out what we can bring to your project talk it through with our expert team on: UK: (01636) 602160, outside UK: +44 (0) 1636 602161 or email: sales@ampetronic.co

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