

IP Rating

For loudspeakers that are installed outside, it is important that the unit has the right degree of protection against the weather conditions that it will encounter in service. The IP (Ingress Protection) System provides a means of classifying the degrees of protection to dust and water afforded by electrical equipment and enclosures. The system is recognised in most European countries and is set out in European Standard BS EN 60529:1991. specification for degree of protection provided by enclosures (IP code).

The system has two figures although it can have a third for mechanical impact, but this is not normally used in practice. The first figure shows the degree of protection against solid objects and the second figure shows the degree of protection against liquids.

If a unit has an IP rating of IP43 you can see from the table that it would be protected against solid objects greater than 1mm and against water sprayed to an angle of 65 degrees from the vertical.

Protection against solid objects

- 0** No protection
- 1** Protection against solid objects over 50mm
- 2** Protected against solid objects over 12mm
- 3** Protected against solid objects over 2.5mm
- 4** Protected against solid objects over 1mm
- 5** Protected against dust- limited ingress
- 6** Totally protected against dust

Protection against liquids

- 0** No protection
- 1** Protection against vertically falling drops of water
- 2** Protected against direct spray of water up to 15 degrees from vertical
- 3** Protected against sprays of water up to 65 degrees from vertical
- 4** Protected against water sprayed from all directions
- 5** Protected against low-pressure jets of water from all directions (no harmful deposit)
- 6** Protected against strong jets of water eg. for use on ship decks
- 7** Protected against the effects of immersion up to 1 metre for short periods
- 8** Protected against long periods of immersion under pressure