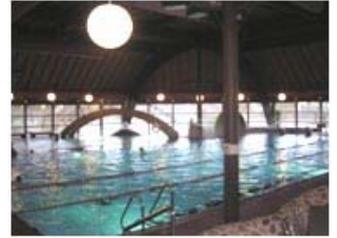


Public Address (PA)/sound reinforcement systems for indoor swimming pools - three tips to ensure you get a great system

Amplifying sound in indoor pool areas is a tricky business. Personnel announcements must be heard and understood by all guests. Background music should sound clean and natural. Humidity and chlorine in the air necessitate tough and reliable equipment.



Given all these challenges, we have put together a quick guide to getting a suitable system.

Step 1: Choosing the right partner

You need someone who is competent and ideally has experience with sound reinforcement systems for indoor pools. Acoustic engineers, consultants, and companies that specialise in the field should be able to help. But make sure you ask your candidate the following questions:

	Yes/No
Do they have a positive track record in the planning and installing of sound reinforcement systems?	_____
Can they provide relevant references as proof?	_____
Are they connected to a professional association such as the European Waterpark Association (EWA)?	_____
Do they have experience in the planning and installation of sound reinforcement systems for indoor swimming pools?	_____
Do they offer computer-based room acoustics simulations?	_____
Are they familiar with the following terms?	_____
- speech intelligibility	_____
- direct sound/sound reflection	_____
- sound equalization	_____
- parametric EQ	_____
- Digital Signal Processor (DSP)	_____

If the candidate can answer 'yes' to most or all of the above questions, it is likely that you have found the right partner. But you also need to make certain they can meet your personal needs.

Step 2: Planning the system

Whether or not you get a sound reinforcement system that you will be happy with depends on this step. It is of great importance that the contractor knows what you expect from the system.

The least you can expect is:

- high speech intelligibility
- brilliant music playback
- durability and reliability
- user-friendliness
- the capacity for upgrades and changes
- low costs in case of upgrades or changes

Begin the planning as soon as possible and make sure that the following points have been covered in talks with the contractor:

General: Does the system have a DSP with parametric EQ? Do room acoustics pose a problem?

Speech intelligibility: CIS $\leq 0,7$; background noise +6dB

Music: frequency range needs to be at least 80-13.000Hz \pm 3dB

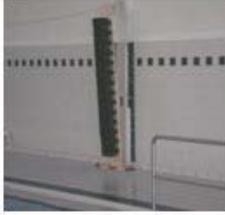
Durability: Is the equipment weatherproof/water resistant? Do they offer more than 3 years warranty?

User-friendliness: Is the control panel laid out clearly enough? It should only have buttons/switches for source selection, preset-choices and volume control.

Flexibility: How easy is it to connect the system to other devices such as microphones or musical instruments? Can the software be updated or changed without any problems? Make sure you do not accept any programmes that require passwords you do not have.

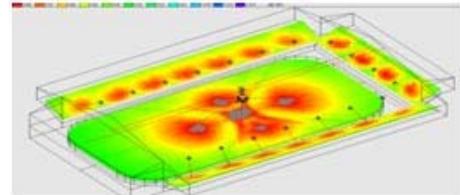
You can verify the contractor's statements by:

asking for a demonstration of your system



checking relevant references

asking for a computer-based acoustics simulation (with programmes such as Modeler, EASE or CATT)



checking the manual and/or product descriptions

Step 3: Implementing the plan

To ensure that you get what you asked for you should always follow these tips:

- Never depart from the concept and change the loudspeaker type or positions of speakers. _____
- Protect the equipment from dirt and physical damage. _____
- Don't use the system before it has been calibrated and tested. _____
- Don't allow the system to be calibrated before the instalment process has been completed, the pool filled with water and all surfaces finished. _____
- Don't rush the calibration process. _____
- Compare the completed system with the concept. _____
- Thoroughly test all of the system's options and audio inputs. _____
- Make sure that you are given a short manual to everyday use of the system. _____
- Test the system by playing music and announcements in different languages. _____

Once you have done all this, it's time for you to sit back and enjoy your new sound reinforcement system.

Still have questions?

Call our hotline (free in Germany) on 0800 - 27 24 255

E-Mail: info@system-nt.de