Future expansion

More zones and extra power per zone can be added by incorporating additional routers (up to 60 zones) and Plena Booster Amplifiers (up to 480 W per 6 zones).

Installation

The Plena Voice Alarm System is designed for plug-and-play installation, and is easily configured using DIP-switches or software for more advanced configuration. Once configured, the PC is disconnected. System interconnections are made using standard RJ45 connectors and CAT5 cable. Up to 255 spoken evacuation messages can be stored. Messages can be merged to allow more flexible use of pre-recorded messages.

EVAC compliancy

For the installation to be fully EVAC-compliant, loudspeakers and cabling must also conform to the relevant standards. Bosch can provide training and certification for partner installers – details available on request.

Equipmentlist		
LBB 1990/00	Controller	1 x
LBB 1996/00	Remote control panel	1 x
LBB 1956/00	Call station	1 x
LBB 1957/00	Call station keypad	1 x
LBB 1935/00	240 W booster amplifier	1 x
LBB 1961/00	Plena BGM source	1 x

Bosch Security Systems
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Application note | Plena

Plena Voice Alarm System
Swimming pools

Security Systems

EVAC-compliant voice alarm

The Plena Voice Alarm System is designed for emergency evacuation in applications where compliance to internationally recognized standards like IEC60849 is required. All the essential EVAC functionality – such as system supervision, loudspeaker line surveillance, spare amplifier switching, digital message management and a fireman's panel – is built in.

Based on the 6-zone LBB 1990/00 system controller with separate call- and background music (BGM) channels, a Plena Voice Alarm System can be easily expanded to up to 60 zones using additional 6-zone routers. It is completely compatible with Plena Public Address equipment, and Bosch EVAC-compliant loudspeakers and accessories.

Communication you can rely on

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Application note | Plena

Swimming pools

Swimming pools and other indoor sports and recreational facilities are typical examples of smaller applications with few zones. The main priorities are excellent speech intelligibility and compliance with IEC60849 standard (and its national equivalents), although music in different areas is optional.

Introduction

An EVAC system for a swimming pool requires voice alarm functionality for regular announcements and background music (optional). To ensure that all visitors in the relatively noisy pool area hear emergency messages, the power output for that zone is relatively high. Other areas, such as the changing rooms and offices, have lower power requirements.

Summary of requirements

- Typically up to 6 zones
- Speech intelligibility is the main priority
- High power requirement in the noisy pool area
- Fireman's panel by fire exit
- Call station in office/reception
- Additional public address functions for announcements
- BGM

Solution for a 5-zone system

The Plena Voice Alarm System controller handles routing to up to 6 zones, so no additional routers are required. The office/reception is equipped with a call station plus keypad for individually addressing zones, while a fireman's panel (with overall priority) is built in by the emergency exit. The Plena Voice Alarm System is a two-channel system, so BGM can still be provided in zones not receiving a call.

Power requirements

The system controller has a built-in 240 W booster amplifier, making it possible to drive up to 40 loudspeakers with a power handling capacity of 6 W each. The pool area requires high-power music horn loudspeakers qualified for use in a high humidity atmosphere. The snack bar uses cabinet loudspeakers for music reproduction. The zones are defined as indicated in the table. An additional Plena Booster Amplifier is used for two-channel operation and as a spare amplifier.

Zones

Zone 1	Indoor pool area	5 x 30 W horn loudspeakers
Zone 2	Children's pool area	2 x 10 W horn loudspeakers
Zone 3	Changing rooms	4 x 6 W ceiling loudspeakers
Zone 4	Snack bar	4 x 6 W cabinet loudspeakers
Zone 5	Office	2 x 6 W cabinet loudspeakers
		Total 230 W