



Solution

The powerful LBC 3210/00 line array loudspeakers (1) from the XLA 3200 range are the most suitable for this type of application. Being 1.20 m high they can cover a large outdoors area (approximately 30 m) with high-quality reproduction of speech and music. Their excellent directivity and greatly-suppressed side lobes mean that sound is concentrated in the listening area, and does not cause sound pollution outside it. The LBC 3210/00 also generates a uniform sound distribution, so people in the vicinity of the loudspeakers perceive the same volume as those much further away. The loudspeaker housing is water- and windproof, so no special provisions are necessary for outdoor application.

In a typical configuration at an outdoor swimming pool, the XLA 3200 loudspeakers are driven by a Plena system pre-amplifier (4) with two boosters (5) for 2-channel operation. The Plena can also broadcast to up to five additional areas (6) in the vicinity of the pool. The XLA 3200 loudspeakers are mounted on a pole already in position for lighting. A second mounting point is provided to enable 2-point mounting. For audio reproduction in a bar or dressing room, cabinet (3) or ceiling (2) loudspeakers can be used. Background music is supplied by the Plena music source. (7)

Simple two-step mounting

The mounting procedure for all XLA 3200 loudspeakers is extremely simple. A chart is supplied with the loudspeaker, which shows the ideal installation height for the area the loudspeaker has to cover. Once the appropriate height has been determined for a given area using the chart, the loudspeaker is mounted at the angle marked on the mounting bracket. This simple two-step procedure is very much easier and more accurate than traditional trial and error installation methods.

Configuration			
LBC 3210/00,	XLA 3200 90/60W line arrays	: 4x	(1)
LBC 3951/01,	9/6W ceiling loudspeakers	: Multiple	(2)
LBC 3410/01,	15/10W cabinet loudspeakers	: Multiple	(3)
LBB 1925/10,	Plena system pre-amplifier	: 1x	(4)
LBB 1935/00,	360/240W booster	: 2x	(5)
LBB 1946/00,	Plena 6-zone call station	: 1x	(6)
LBB 1961/00,	Plena tuner and CD/MP3 player	: 1x	(7)

XLA 3200 loudspeakers in outdoor recreational areas



Security Systems



The XLA 3200 (eXtended Listening Area) is a range of three line array loudspeakers. Through advanced filtering and positioning of the loudspeaker drivers, these line arrays offer greatly improved audio directivity. This means that all relevant frequencies are present over a wider area than with conventional loudspeaker columns, so more listeners can enjoy clear speech and natural music reproduction. A new approach to mounting makes XLA 3200 line arrays extremely easy to install.

Outdoor recreational areas

This application note describes how XLA 3200 line array loudspeakers can be used as part of a system which provides clear sound reproduction in outdoor swimming pools and other types of recreational areas.

Introduction

In outdoor swimming pools and recreational areas, public address systems should offer high speech intelligibility, because announcements and warnings have to be heard clearly throughout the entire area. Good music reproduction is important too, as music is very often broadcast when no announcements are being made. The sound generally has to travel over a relatively large distance. Outdoor venues present a specific acoustical challenge, because while sound should reach everywhere within the area, it should not carry beyond the perimeter and cause disturbance in neighbouring areas. Loudspeakers used outdoors should obviously be weatherproof.

Summary of requirements

- Excellent intelligibility of speech and music
- Acoustical coverage of a large area
- Uniform sound distribution within the recreational area, minimal sound beyond the perimeter
- Resistance to weather