



The XLA 3200 loudspeakers are connected to a Plena mixer amplifier (2). The loudspeakers are connected directly on the 100 V loudspeaker lines. One or two microphones (3+4) are connected to the Plena by means of a balanced line. If a condenser microphone is used, the length of this line is not critical.

#### 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 iterative installation methods.

#### Configuration

LBC 3201/00, XLA 3200 90/60W line arrays	: 4x	(1)
LBB 1912/10, Plena mixer amplifier	: 1x	(2)
LBB 1949/00, Gooseneck microphone	: 1x	(3)
LBC 2900/xx, Dynamic hand-held microphone	: 1x	(4)

#### Solution

The LBC 3201/00 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 area with high-quality reproduction of speech and song. By offering extremely accurate directivity and greatly-suppressed side lobes they are ideal for reverberant spaces, and greatly minimize the potential for microphone feedback. They also generate uniform sound distribution throughout the entire listening area, so the sound is not too loud at the front and not too quiet at the back. The LBC 3201/00 have an attractive yet neutral silver finish to blend easily with classical interiors or modern architecture. And they are only 8 cm wide, so are very unobtrusive. This means that in a church, for instance, a loudspeaker can be mounted inconspicuously on a wall or pillar on either side of the altar. For a longer listening area, additional speakers connected to delay units can be positioned further down the church.

## XLA 3200 loudspeakers in places of worship



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.

#### Places of worship

This application note describes how XLA 3200 line array loudspeakers can be used as part of a system which provides clear sound reproduction in places of worship and other reverberant indoor environments.

#### Introduction

In places of worship such as churches and mosques, everyone present should be able to enjoy natural reproduction of speech and song. Places of worship are generally very reverberant, and sound reflected from hard walls and ceilings can seriously compromise the quality of broadcast sound. They are also often large, so any loudspeakers used should achieve a high coverage. Positioning of the loudspeakers is also an important issue. When listening to amplified live speech, it is more comfortable and natural for listeners if the sound originates from beside the person who is speaking. But the loudspeakers should be as unobtrusive as possible, so as not to disturb the aesthetic balance of the room.

#### Summary of requirements

- Excellent intelligibility of speech and music
- Minimized reflection of sound
- Acoustical coverage of a large area
- Amplified sound should originate close to the person speaking
- Loudspeakers should not be too prominent
- No acoustical feedback