

# Suspending Loudspeakers

by Andrew T. Martin and Karl G. Ruling

## *In Houses of Worship*

Houses of worship get no exemption from the Law of Gravity. It would be nice if they did, but they don't, and occasionally suspended loudspeakers crash to the floor of a sanctuary or fellowship hall to remind people of this fact. Most often, the loudspeakers that have fallen were ones that were rigged as do-it-yourself projects. While do-it-yourself audio installations are not necessarily unsafe, and they can save a congregation some money and give technically handy members an opportunity to contribute their labor, these projects should be approached with caution. Suspended loudspeakers are very unforgiving; little mistakes have severe consequences.

It is certainly understandable that houses of worship want to get the most result from the least expense. The more value that can be stretched from each dollar leaves more funds for the benefit the congregation and the community. However, we've never run

across anyone who felt it was more important to save money than to suspend his or her loudspeakers safely. Nevertheless, there are a tremendous number of loudspeakers that have been suspended improperly and are in a count-down to a mechanical failure that will result in a falling loudspeaker. How can this happen?

Let's start by outlining a few salient points:


- 1) Loudspeakers can be heavy, with some weighing as much as 250 pounds. However, even if a loudspeaker weighs only 10 pounds and it falls just eight feet, it will be traveling faster than 15 miles per hour when it hits. It will pack enough energy to fracture a skull or break a limb.
- 2) Some loudspeakers are intended for overhead suspension, but some are not.

- 3) The reasons most loudspeakers fall is that the attachment to the building or the attachment to the loudspeaker was not done properly. In either case, the failure could have been avoided if the installer was educated about how to go about the installation.

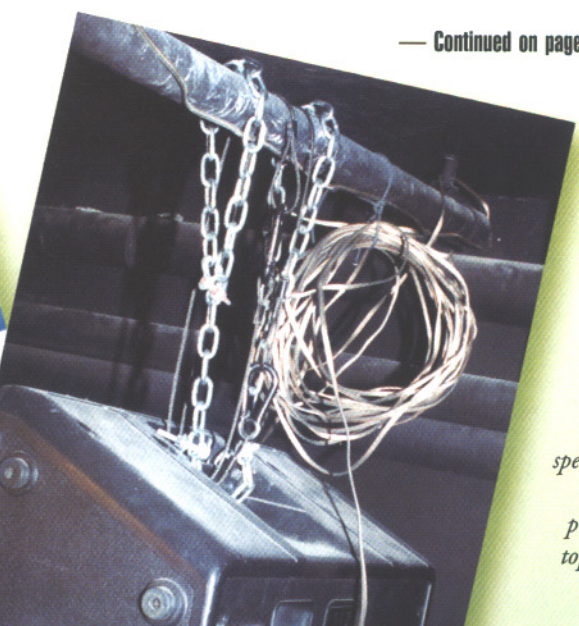
Not all loudspeakers are suitable for rigging overhead. Those that are intended for overhead suspension come with structural attachment points that are installed by the loudspeaker manufacturer in an enclosure constructed for the considerable stresses encountered when a loudspeaker is suspended. The average loudspeaker is made to sit on the floor or on a stand, and is not built to be suspended. These loudspeakers cannot be suspended safely without major modifications to the loudspeaker enclosures or the construction of an elaborate external structure to hold them. Most of the time it is more economical to purchase loudspeakers intended for

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*This is an example of a properly suspended loudspeaker using rated compression sleeves and forged wire rope clips.*



*This loudspeaker is improperly suspended by the carrying handle despite the numerous specially designed rigging points provided on the top and bottom.*