

Loudspeaker rigging comes of age.

HANGIN' HIGH

By Andrew T. Martin

Loudspeaker rigging hardware has become an integral equipment component of mid- to large-scale sound reinforcement rental companies. Rigging is also becoming a larger part of smaller regional companies, not to mention the local contracting markets.

The demand for flyable loudspeakers has created a new area for rental houses and manufacturers to explore. Together, the two parties are making advancements that will change the outlook of loudspeaker flying hardware. Nevertheless, the sound reinforcement industry is relatively immature on the technical subject of flying loudspeakers.

To date, most of the loudspeaker rigging hardware systems have been mustered together with components from the aircraft cargo control industry. Only recently have some manufacturers and rental houses be-

gun to build rigging hardware that is requirement specific for utilization with loudspeakers.

To generalize, slow development of specialized rigging devices in the sound reinforcement industry originated from a lack of experience in the field. Specialists in rigging loudspeakers are few and far between, and those who are experienced are often too busy to share their knowledge with others.

In the hopes of promoting safe rigging practices, this article will touch upon many of the aspects of loudspeaker rigging that affect the practice of flying loudspeakers in both portable and permanent applications.

The primary concern for anyone flying loudspeakers should be safety, a consideration that begins with the loudspeakers themselves. There are many manufacturers of loudspeakers that offer factory-installed rigging attachment hardware, and the user can be fairly confident that a factory loudspeaker set up this way will be adequately braced internally for use in multiple loudspeaker arrays.

However, there are structural limitations to any loudspeaker with rigging hardware, and it is always a good idea to ask the manufacturer for the certified structural engineering specifications prior to rigging anything. If the loudspeaker is of a proprietary design, the entire structure needs to be engineered and certified. On the road, copies of the certified engineering specifications should always accompany the loudspeaker system.

making most loudspeaker rigging systems incompatible. However, there are a few common rigging system designs worth reviewing. Perhaps the most common uses the cargo control pan fitting (see Figure 1). Other common attachment points include extruded aluminum track, stud fittings and threaded plates. Most of these fittings are reinforced on the inside of the loudspeaker enclosure with steel backing plates which help distribute the stress through the loudspeaker cabinet. To further aid with distributing the stress, many loudspeakers have the attachment hardware side mounted, or angular backing plates that channel the weight load to the side of the loudspeaker enclosure directly. Other manufacturers incorporate steel members through the entire loudspeaker, thereby eliminating the need to rely on the cabinet's own structural integrity.

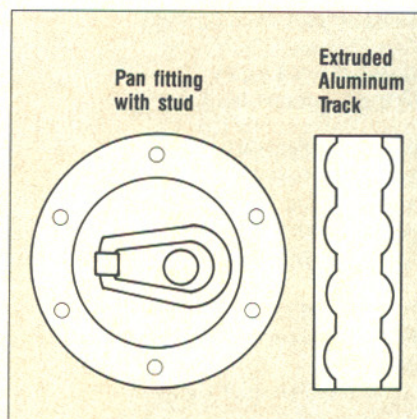


Figure 1. Common attachment points include the cargo control pan fitting (left) and the extruded aluminum track.

RIGGING DESIGNS

Loudspeaker attachment point methodology varies by manufacturer, thereby

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