

FLYING LOUDSPEAKERS (cont)

One must remember that any rigging system is only as good as the weakest link in the system. Many equipment failures can be avoided if the rigging hardware system is designed and then certified by a structural engineer, and if the builder is a professional fabricator with the proper equipment and knowledge to produce structural assemblies. Even if the system is designed well, built properly and insured, the ultimate success and/or failure will rely on the user and assembler of the system. This area is often overlooked by sound reinforcement rental companies and installers. As discussed earlier in this article, it is not the responsibility of the rigger to implement the rigging hardware system safely, ultimately that responsibility belongs to the owner and/or user.

Another liability associated with loudspeaker flying hardware systems is the cost. Assuming the process is done correctly, flying loudspeaker systems is not an inexpensive venture. On average, a loudspeaker flying hardware system will cost between 10%-25% of the loudspeaker cost. As this article has discussed, it is not worth trying to cut back on the cost of the loudspeaker flying hardware since it can inevitably cost far more in the long run: in fact, a tragic accident will most likely put a company out of business. Flying hardware systems are an investment for the future: a company should not purchase a loudspeaker flying hardware system until the finances are there to do it right. Many companies will attempt to design their own rigging hardware systems thinking that it will save money, however it usually costs a great deal more than buying a flying hardware system from a reputable manufacturer. Once one considers all of the research and development (since the systems seldom work the first time), structural analysis and engineering fees for the certification, manufacturing costs for outside vendors with certified welders and fabricators, finishing costs, and destructive loading tests it becomes apparent that the cost of constructing a proprietary system can be in excess of 150%-200% of market available flying hardware systems. Another hidden cost is found when the company needs additional loudspeakers for a large production, however the sub-rental company operates with a different flying hardware system. As discussed earlier in the article, most flying hardware systems are not compatible; therefore the company needs an additional inventory of flying hardware in order to accommodate the occasional sub-rental. Standardization of a popular rigging hardware systems between rental companies is a much more economical option.

THE FUTURE

The future of the professional loudspeaker production industry holds a great deal of advancement for loudspeaker flying hardware systems. However, the industry must be careful and act responsibly in order to protect the industry from government regulation and restrictions. Sound reinforcement company owners need to work with loudspeaker manufacturers and rigging hardware manufacturers to exchange information and partake in training seminars.

Loudspeaker manufacturers have begun to cooperate with rigging manufacturers in order to provide cost effective and safe solutions for the users of their products. The future will bring more standardized products and hardware for flying loudspeakers. The future will also bring new materials into the rigging business. The advent of modular truss rigging hardware systems has opened new doors for lightweight materials such as fiberglass and polymer plastics.

The computer age will also touch the loudspeaker rigging industry. It is conceivable that servo motor driven loudspeaker flying hardware systems will work in conjunction with computer simulation and control software in order to steer loudspeaker arrays and optimize loudspeaker array performance from venue to venue.

As the field of loudspeaker rigging becomes increasingly more important, there is a large

potential for innovative solutions to complicated problems. Be assured that loudspeaker flying hardware manufacturers continue to look for new flying hardware systems that will add safety and efficiency to the practice of flying sound reinforcement systems.

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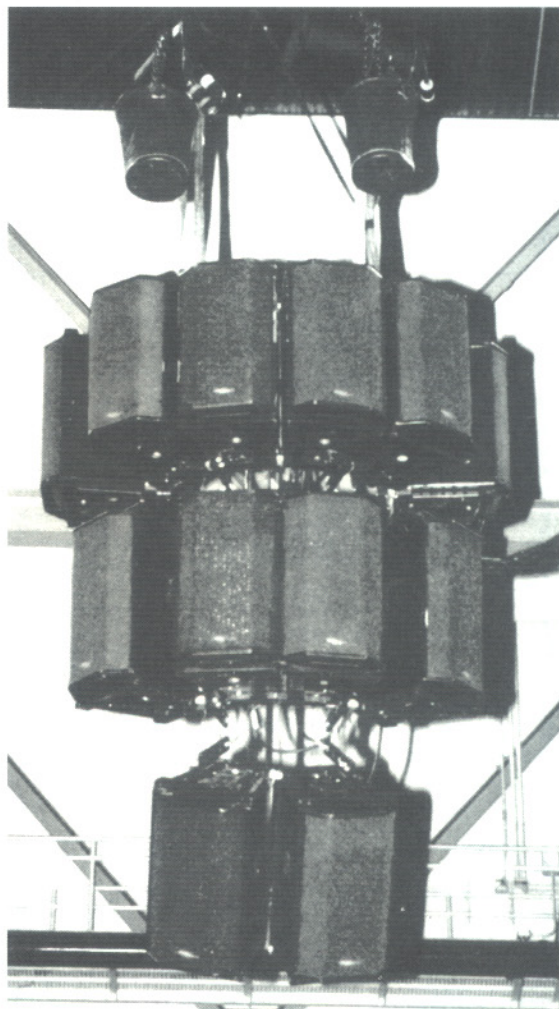


Fig 3. Modular Truss system from ATM Fly-Ware.
Photo courtesy ATM Fly-Ware, Carson, CA USA.

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