Subject: You forget the amplifier, Grasshopper.
Posted by Bill Fitzmaurice on Tue, 05 Oct 2004 19:41:11 GMT
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Yes, they could have used smaller drivers, they did exist. But in 1947 a very large amplifier was one pushing 25 watts. A high excursion ten, or any other size for that matter, was a moot point. Long excursions require heavier cones to withstand the stress, which raises Mms, which lowers Bl and raises Qms, which lowers sensitivity, and with the amps available it just wouldn't work.This scenario also resulted in horns with large throats and hypex tapers, as the mechanical limitations of the drivers would not allow them to operate into very high throat impedances. With the high Bl/long excursion/high Mms drivers available today I'm able to design bass horns with tapers that give throat impedances far higher than it was possible to employ 60 years ago, which allows a drastic reduction in overall cabinet size. But those drivers would have never been developed if there weren't 300 watt and better amps available to take advantage of them. The 747 analogy wasn't a joke; Howard Hughes 1946 Spruce Goose was larger than a 747; it 'flew' only once, though in fact it didn't actually fly. Ground effect allowed it to achieve the spectacular altitude of some ten feet. Nothing wrong with the design, but the engines available weren't up to the job. Same thing with the A7, which originally used drivers rated at only 25 watts, not because they couldn't build 100 watt drivers, but because they didn't need to.