

the whole characteristic had shifted fortuitously downwards in frequency, so justifying his claimed "smooth response from 40 Hz to 400 Hz". A crossover is indicated at 400 Hz to a conventional mid-range and tweeter unit: both could be horn-loaded, of course.

Construction

Before tackling this daunting task, the author made two scale models, a 1:8 in cardboard, followed by a 1:3.6 in 3-ply. The working model exhibited a roll-off below 180 Hz, which scaled down to 50 Hz for the full-sized unit. The intrinsically self-bracing structure indicated relatively thin panelling. For cheapness (but not light weight!), half-inch, high-density chip board was used, costing less than £9.00 in all. The truss and some fillets were made in marine 9-ply, while blocking, corner fillets, air seals, and so on were made out of oddments of hardwood and deal. Joints were glued and screwed except for the access door—one large side panel—which was secured with 14 wood screws. This was necessary for fitting (retrospectively) the CG12 and for possible maintenance. With the door off, the top and bottom fillets would have been precariously unsupported, were it not for centre-line fins, which were the author's distinctive (cf. Jecklin, Ref. 6) modification to Klipsch's constructional designs—see Fig. 11, 12, and 13, as well as the accompanying photographs.

References

1. Paul W. Klipsch, *Wireless World*, Feb. 1970
2. Leo L. Beranek, *Acoustics*.
3. Abraham B. Cohen, *Hi-Fi Loudspeakers and Enclosures*, 2nd Ed., Newnes Butterworth, London, 1975
4. P.W. Klipsch, *A Low Frequency Horn of Small Dimensions*, *Journal of the Acoustic Society of America*, Vol 13, pp 137-144 (1941)
5. Rocard 1933 cited in Moire's *Acoustics*
6. J. Jecklin, *Wireless World*, Febr. 1969

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- A Front
- B Starboard flank
- C Port flank
- D Starboard wing
- E Port wing
- F Corner fillet
- G Base plate
- H Top plate
- J₁ Baffle board
- J₂ Spacer
- K Top incline
- L Bottom incline
- M Late addition to top incline
- N Late addition to bottom incline
- O Top fish tail
- P Middle fish tail
- Q Bottom fish tail

- R₁ Starboard flare, upper part
- R₂ Starboard flare, lower part
- S₁ Port flare, upper part
- S₂ Port flare, lower part
- T₁ Starboard deflector
- T₂ Port deflector
- U₁ Upper wedge, forward part
- U₂ Upper wedge, rear part
- V₁ Lower wedge, forward part
- V₂ Lower wedge, rear part
- W Top bevel
- X Middle bevel
- Y Bottom bevel
- Z Top plate with flaps

