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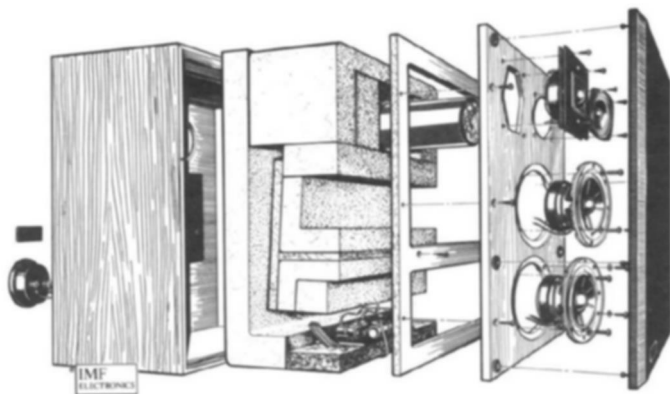
IMF ALS30 loudspeaker

Manufacturer: IMF Electronics, Westbourne Street, High Wycombe, Bucks.

Maker's data. Drive units: two 16.5cm (6.5-inch) bextrene bass units, 10 cm (4-inch) midrange and 2.5 cm (1-inch) tweeter. Crossover frequencies: 250, 450 and 3,500 Hz. Frequency range: 29-20,000 Hz. Matching impedance: 8 ohms. Efficiency: 40 watts at 1 metre, 99dB. Amplifier requirements: 25 to 50 watts. Dimensions: 56.8 x 28 x 30cm (22 1/4 x 11 x 11 3/4 inches.) Net weight: 16kg. Price £275 per pair.



Fig. 1: Constructional details of the IMF ALS30 loudspeaker, showing baffle-board layout and internal tunnel



addition of this sub-bass unit is claimed to extend the response down to 30 Hz and to have the advantage of affording a degree of protection against overload distortion, since high power levels at any instant are taken over by the unit not at resonance.

The complexity of this drive unit arrangement is matched by elaborate interior construction, as shown in the exploded view diagram (Fig. 1). Though the outer casing of the IMF ALS30 measures only 56 x 28 x 30cm, a shade less than the extremely popular '2 cubic foot' size, it is strongly braced and packed with goodies so that it weighs a hefty 16 kg. Acoustic foam absorbers prevent internal standing waves and form the labyrinth passageway. The primary bass driver is mounted quite high on the baffle board so as to integrate closely with the 10cm bextrene mid-range unit and domed tweeter. The bass drivers are nominally 16.5cm units with ribbed bextrene diaphragms and the mid-range unit is separately terminated by a filtered cylindrical tube. The speakers are supplied in mirror-image matched pairs and the crossover network is mounted on the cabinet floor. The connecting sockets are colour coded, set into a recessed panel and will accept bare wires or 4mm plugs.

The reviewed speakers were superbly finished in attractive real walnut veneer, which also coated the baffle board. The black grille cloth is transparent to sounds, but optically conceals the drive units completely. It is stretched on a wood frame with press-studs for easy removal if required. The front edge of the cabinet is moulded to complete a very neat appearance.

How they performed

First impressions on listening to the ALS30 speakers were entirely favourable. Treble was crisp and clear but without the slight edge which I often find on small bookshelf-sized speakers. This is largely a question of bass/treble balance and I got the feeling that the IMF designers in acknowledging that extreme bass was necessarily going to roll off in this compact system, had not pushed the treble on up into the supersonic regions. As for the bass end, this sounded

quite impressive at first but extended listening revealed that some musical material was being more naturally reproduced than others. Deep organ notes, for example, were recessed while cellos and some voices were raised or made more prominent. In comparisons with larger loudspeakers, including the ALS30's big brother, the IMF TLS80/11, I identified the effect as a slight rise in response broadly in the 100-160 Hz region followed by a fairly steep slope at lower frequencies.

Of course this frequency range is readily amenable to changes in speaker position, and I found that my starting position was closer to the back wall than the optimum in my particular room. Moving the speakers forward 15cm made for smoother bass. The height above the floor is critical too, of course, but I had naturally used floor-stands to bring the tweeter and mid-range units to about ear-height and this is what the designers recommend. Stereo imaging was excellent and I found that I could turn up the volume to realistic levels, and beyond, without any feeling of stress from the drivers.

In fact, efficiency is a little below the average but the maker's recommendation of amplifier power in the region of 25 to 50 watts per channel accords well with the sort of good class audio equipment I would expect purchasers of these speakers to have in mind. I measured about 85 dBA at 1 metre in my normal-sized room for a mid-band input of 1 watt and this lines up well with the maker's claims. The impedance is nominally 8 ohms—the standard figure nowadays for best matching to contemporary solid-state amplifiers—and I found that this value was well maintained at all frequencies, never falling low enough to embarrass any touchy amplifiers.

Electrically, and in terms of appearance and size then, the IMF ALS30 will fit nicely into practically any domestic situation. Acoustically, bearing in mind my suggestion that the slight rise in upper bass frequencies makes it important to position these speakers with due attention, the reproduction is characterized by clear and natural detail which should please musicians and audio buffs alike.

JOHN BORWICK.

THE not inconsiderable reputation of IMF loudspeakers amongst professionals and amateur sound enthusiasts relates primarily to their range of 'transmission line' loudspeakers such as the TLS80 (the Mark II version of which we reviewed in July 1978) and the Reference Standard Professional Monitor Mk. IV. However a transmission line loudspeaker, relying as it does on loading the rear of the bass driver with a folded pipe measuring one-eighth of the wavelength at its free-air resonance frequency, is necessarily a rather large animal.

To produce speakers of more modest dimensions, IMF have therefore worked on a variation of the principle and come up with the 'active line' loudspeaker. This uses two bass drive units in an unusual arrangement designed both to extend the bass response and avoid the low efficiency normally associated with small boxes. The primary driver is loaded by a tapered, filtered transmission line but, instead of this ending in a passive port opening, it has a second drive unit fed through a dividing network crossing over at 250 Hz. The two units are similar but their main resonance frequencies are different from each other, one being that to which the line length is tuned. The