

Making a loudspeaker: the Falcon Acoustics IMF100

by Alan Sircom

Hi-Fi+ has never been a magazine obsessed by DIY options; there's nothing whatsoever wrong with making your own audio equipment, but it's sometimes dismissed by the high-end cognoscenti. The high-end mindset would rather buy a good BMW, than spend BMW-sized money on a kit-car, no matter how good the end result. It's more turn-key luxury than buying a potentially better design in kit form. There is good reason for this; there have been a lot of popular speaker brands almost put out of business by clones of varying degrees. But a lot of the reservations are pure snobbery.

There is another reason, too; an unwillingness to make too many schoolboy errors in constructing a loudspeaker design. Those fears might be justified when faced with trying to solder components to a circuit board for the first time in your life; messing up could prove very expensive to the uninitiated. And that's what makes Falcon Acoustics' IMF100 stand-mount speaker kit so appealing, no soldering. In fact, while it's a little fiddlier to build up than an Ikea Lack table (the turntablist's table of choice through much of the 1980s), if you've built anything from the Swedish flat-pack specialists... you are almost overqualified to build the IMF100. It even comes with its own Allen keys!

Building the IMF100 is relatively easy; it's essentially eight parts (nine if you include the grille) and less than 20 bolts in total, and parts like the crossover are supplied with push-fit connectors. Or rather, it's easy the second time. Give yourself an afternoon to build them, and you'll likely take most of that to build the first one and about 25 minutes to build the second. This isn't a criticism of the build instructions, more how naturally cack-handed we are in doing an exercise that is 'new' to us. This came as a bit of a shock to me, as I've been to enough loudspeaker factories to see the process up close and stuffing boxes with wadding and feeding the crossover leads into the cabinet and hooking them to the rear of a driver looks easy. Then you try it and realise those stubby, sausage fingers don't curl around corners of solid cabinet. My advice here is to slow down and be methodical.

You don't poke your fingers inside the cabinet, you move the wires out of the cabinet, and pay close attention to the order of gaskets (which sounds like some obscure group that sit in the House of Lords). In fact, 'order of the restraining rings' is more accurate, even if it sounds a little pervy. Regardless, the build-up is all a series of 'of course' moments that gives you an appreciation for those who do speaker construction as a full time-job.

What is the IMF100 like in performance terms. The name is a bit of a clue. IMF doesn't just stand for the International Monetary Fund or the name of the team that is core to Tom Cruise's most successful franchise; in the audio world, IMF stood for Irving M. Fried (1920-2005). 'Bud' Fried created quite an import empire in the 1960s, finding some of the best of British audio (such as Lowther corner horns and the Quad Electrostatic) and later creating his own Anglo-American company called IMF, which began in 1968. IMF specialised in transmission-line loudspeakers, including what is commonly considered the first wide-band loudspeaker (the IMF Monitor). IMF continued into the late 1980s and much of the design input for IMF models (and subsequently TDL) came from the late British engineer and businessman John Wright (1939-1999). The IMF100 leverages much of the technology that went into those classic transmission line designs of Wright, TDL and IMF. IMF is now owned by Falcon Acoustics.

Given the history, the IMF100 is a transmission line two-way standmount. It uses the same drive units – the T27 tweeter and B110 mid-bass – found in LS3/5a loudspeakers (Falcon uses them in its own 'gold badge' LS3/5a and supplies them to LS3/5a enthusiasts looking for replacements to the original KEF units). Given the cabinet is already supplied pre-veneered, the transmission line itself is not something with which you have dealings in the build-up; know that 'it's complicated!'

Fully built, you'll want to plug and play right away, and although the loudspeaker does improve after a few hours of bedding in and playing, the basic character of the speaker remains constant, and it's a loudspeaker of good character. There's more than a hint of classic LS3/5a to the sound – ►

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▶ those drivers were used for their tonal accuracy (especially in the midrange) and not chosen for their endless dynamic range, and the IMF100 still reflects those basic parameters. Nevertheless, the loudspeaker has a lot more bass extension than you might expect from a cabinet of the IMF100’s volume, such is the impact of the transmission line.

Having played with transmission line loudspeakers of the 1980s, my worry was that you get a lot of blaring bass extension, but seemingly all of that bass slightly out of step with the midrange and above. However, in the IMF100, this doesn’t seem to be the case. Falcon has voiced the loudspeaker to give gentle extension to the sound rather than adding a bass foghorn, and with that comes some added pace. OK, so the IMF100 is never going to be as snappy sounding as a taut sealed box design, but neither does the

bass trail the rest. In short, the overall balance makes the IMF100 excellent for use in the sort of domestic room where a pair of medium-sized stand-mounts look good, and it falls mid-way between the ‘upfront, big and bold’ sound of modern large stand-mounts and the more laid back sound of classic designs. That’s a good balance overall.

The downside to all this is that loudspeaker kits are not what you’d call ‘try before you buy’. Their inherent kit-ness, coupled to the fact they are sold direct, makes auditioning virtually impossible, unless you know a fellow-travelling audiophile who has a pair, or we manage to get back to going to hi-fi shows. But if you want a loudspeaker that has much of the good qualities of classic BBC loudspeakers with a bit more bottom end ‘oomph’ at a price where few other options really come up to those standards, it’s worth taking a punt at ▶



▶ the IMF100. You'll need a reasonably meaty solid-state amp to drive them (the Primare I35 did a fine job), but otherwise they are a charming houseguest who might just take up full-time residency.

Building a loudspeaker isn't for everyone, and this isn't the loudspeaker-building kit for folks already on their third or fourth loudspeaker build. At one extreme, there are those so mechanically challenged that an Ikea bookcase ends up looking like it should be in a Salvador Dali painting: and at the other, anyone who starts a conversation with a phrase like "I thought I'd try the steeper Chebyshev roll-off" or has who their own woodtuning shop will never go for a loudspeaker kit this 'pre-built'. But both extremes are missing the point; this is a kit for those who want to try their hands at building their own loudspeaker. The result is a loudspeaker with better material value for money and superior performance than most if not all price-equivalent rivals. Moreover, that interaction with the loudspeaker gives you the kind of pride of ownership that is hard to find in products where it's simply a cash transaction.

In a very real way, we are all moving away from the 'hands-on' part of any hobby or interest, and part of the joy in the IMF100 is getting back to basics. This more direct interaction with the hobby is why people restore cars or musical instruments. It's why a few people use manual focus, manual exposure film cameras and make their own black and white prints. Elsewhere in audio, that direct interaction with the hardware is part of what makes vinyl so endlessly alluring, and part of the reason why people are dusting off open reel tape machines in the time of having access to essentially all music everywhere in the digital domain. Yes, in each case there is an "it's better" argument, but some of that is tied up in the way we interact with the devices on a more direct level. Stripping back and rebuilding a Birdcage Maserati in your own

personal machine shop for the fourth time in a decade might be a joy without parallel, but I'd argue about "it's better" when you are stuck in a cold and wet layby for five hours staring at an old Mini that just blew its core plug again. A loudspeaker that requires more interaction than just putting it on stands and setting them up, gives you just that kind of 'hands-on' experience, and I suspect the IMF100 will cement its place in many a home for that reason. Even if you didn't build it, the IMF100 is an easy speaker to love. +

TECHNICAL SPECIFICATIONS

Type: 1/4 wave folded transmission line two-way loudspeaker

Crossover Frequency: not specified

Drive Units:

Mid/bass – 5inch Bextrene cone

Tweeter – 19mm Mylar dome

Nominal frequency response: +/-3dB 38Hz–20,000 Hz

Nominal impedance: 8 Ohms

Connectors: single wire binding posts

Sensitivity: 86dB 1w/1m

Dimensions HxWxD: 460 x 225 x 275mm

Weight: 12.5kg

Finishes: walnut or rosewood real wood veneer

Warranty: 1 year

PRICE: £1,495 per pair

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