



Aero foil

Breaking with the norm thanks to its lightning-fast ribbon tweeter, **David Price** finds Roksan's TR-5 S2 to be cutting edge

Our world is full of small loudspeakers, trying to get by. Most are inevitably the same take on the medium density fibreboard box, complete with moving-coil drive units – one for the bass and midband, and the other for the treble. Make them cross over at around a kilohertz or two, add a fancy cabinet finish and Bob's your uncle... Nothing is ever new in hi-fi, so it's interesting to see when companies do break out of the formulaic template that affordable audio works to – like the TR-5 S2. This Roksan is just a little off the beaten track, which is quite a surprise at the price. Instead of a conventional dome tweeter, it sports a ribbon tweeter that works with a more regular moving-coil mid/bass unit – in other words, it's a hybrid.

Imaging is well in excess of what I've heard from speakers with ribbon tweeters

The idea is to combine the power and punch of a standard woofer with the delicacy and finesse of a ribbon high-frequency unit. Similar concepts have been around for many decades, but the reason it's not more common is that it's both expensive and hard to implement. Blending the two drive units together seamlessly is a chore, and you can quite easily end up with a 'buy one get one free' type of sound – where each driver competes for the listener's attention. Additionally, as well as being fussy to get right, ribbons are more expensive to make than standard cloth or metal dome tweeters. In a world where margins matter, this is something manufacturers can't ignore. The drive units comprise Roksan's own custom-developed, Far-East manufactured, high-tolerance ribbon design working from 2.5kHz to 40kHz; below this is the 130mm coated-paper cone mid/bass driver, with its diecast chassis and double magnets working down to 39Hz (-3dB). Roksan chose paper for the cone because it's light

relative to doped plastic – giving it a fair degree of speed, which it needs to keep up with the ultra-fast gossamer-thin aluminium ribbon. Peak power handling is quoted at 100W, and efficiency at 88dB. On paper at least, this is a fairly easy speaker to drive. The cabinet is a double-cavity design with internal bracing. 15mm MDF is used for solidity and rigidity, giving good suppression of resonances. It also sports a revised crossover and improved internal layout for a more controlled and faster sound, says Roksan. The eight-element crossover uses modified electrical components and large low-impedance air core Mundorf coils on a carefully laid out double-sided printed circuit board. External finish options are limited to gloss piano black lacquer and a luxury black matte. Overall, it feels like a high-quality speaker, with no evidence of cost cutting at the price.

Sound quality

Every Roksan loudspeaker I've heard has had a spirited performance – if not quite an unerringly neutral transducer of the music. Its boxes are voiced to impart the intensity of what's going on in the recording, rather than seduce with silky

DETAILS

PRODUCT
Roksan TR-5 S2
ORIGIN
UK
TYPE
2-way standmount loudspeaker
WEIGHT
8kg
DIMENSIONS
(WxHxD)
190 x 370 x 280mm
FEATURES
• 104 x 104mm ribbon tweeter
• 130mm paper cone mid/bass driver
• Quoted sensitivity: 88dB/1W/1m (Bohm)
DISTRIBUTOR
Henley Designs Ltd
TELEPHONE
01235 51166
WEBSITE
henleydesigns.co.uk

refinement. So I am surprised to find that it is actually a good deal more polished than I'd expected. It has real strength in depth, combining welcome suaveness and refinement with a real penchant for making music. Of course, it's not flawless – nothing is at this price – but it's charming and enjoyable, with natural talent that's not normal in this section of the market.

Cue up ABC's *Show Me* and it's clear from the start that the TR-5 S2 has a slightly fuller bottom end than many at its size. There's a sense that its low frequencies get a little helping hand, which pushes the bass line along a treat. Moving up the frequency range, the designer has blended the low-end performance seamlessly into the midrange and treble. You certainly don't get the idea that you're listening to two drive units in one box. It is never completely possible to get a perfect marriage between a ribbon and a moving-coil bass unit, but Roksan has done as well as can be expected. Right down low, the TR-5 S2 lacks bass extension, just as you'd expect from a smallish box.

The real joy is the midband and treble. That ribbon is a delightful drive unit with real delicacy, speed and transparency – it's well able to tell you all about the ancillaries in the system, and the quality of the recording itself. Despite this, it remains unshrinkingly musical, giving that characteristic Roksan sound that makes everything seem like a special event. This is a most charming and enjoyable listen, as William Orbit's *Million Town* proves. The TR-5 S2 handles this slice of ambient music beautifully. The speaker's solid bass gives it a useful boost in the bottom octaves, without

The delicacy of the ribbon combines well with the power and punch of the mid/bass driver



Q&A

Tufan Hashemi
MD, Roksan Audio



DP: Why use a ribbon tweeter?

TH: Our choice of ribbon design is important for two reasons. Firstly, it is unusual to see a ribbon tweeter (and especially a good one!) at this price point, so we felt it important (and in the tradition of Roksan) to try and offer something significantly superior to the competition at the price. Secondly, by its nature, the sound of a ribbon tweeter is smooth and refined while retaining excellent detail. This is something quite unique to a ribbon. Dome-design tweeters can sound smooth, but to retain a high level of intricate detail is both rare and/or expensive!

Describe the two drive units

Our ribbon is a laminated aluminium diaphragm design, chosen for its sonic detail and relative hardness. The tweeter can reach down to 2kHz and it crosses over with the woofer at 2.5kHz. At the top end it can reach up to 40kHz. It's a very versatile unit as far as frequency range is concerned. The bass/mid unit is a Roksan bespoke paper-coned design, which is manufactured to a very high standard to our specification in the Far East.

What would you say the aims of the design were sonically?

We set out to create an open sound with wide dispersion. In addition, the bass has to be tight and forceful but also subtle to accompany the finesse of the ribbon tweeter. Roksan has always produced by tradition true audiophile products at reasonable price points, so traits such as imaging, midrange clarity and treble sweetness are priorities that are discernible in the performance of the TR-5 S2.

IN SIGHT



- 1 104 x 104mm ribbon tweeter
- 2 Rear-facing bass port
- 3 Gold-plated bi-wirable binding posts
- 4 130mm paper cone mid/bass driver

HOW IT COMPARES

The Monitor Audio Gold 50 (£950) is a very strong competitor to the Roksan, and in some respects better. Certainly the finish and packaging are on a higher level to the already good TR-5 S2, but when you power it up you'll find it to be an excellent, but slightly less musically satisfying listen. The Gold 50 has a beautifully delicate, detailed and open sound - staggering at the price, perhaps - but it lacks the physical heft of the Roksan, and indeed its sense of speed and expressiveness. It is a more analytical and less passionate performance. As ever, you pay your money and take your choice - after listening for yourself first, of course!

overshadowing the delicate percussion and keyboard higher up. It seems so effortless in the way it unlocks this rather average recording, lending it a fair degree of space and depth. It really lets the music's haunting melody and sense of drama shine through.

It is capable of imaging well in excess of what I've heard from other speakers equipped with ribbon tweeters, but you need to get the placement just right. It needs citing a good 30cm or more from the rear boundary wall, whereupon the sound balances out nicely and you're not aware that the rear-firing port is setting the room off. I find it needs almost no toe-in in my room, such is its fine dispersion. I cue up The Smiths' *Half A Person* and am surprised that I don't find myself deconstructing the recording and production values. Instead, I'm drawn right into the song's sense of occasion; the TR-5 S2 has a generosity of character that keeps pulling you towards the music's heart and soul. It's naturally slightly warm tonal balance helps here, sweetening up the cold, steely recording a touch.

The best way to showcase the classy midband is to put some classical music on, and Ralph Vaughan Williams' *Symphony No.2* proves a joy. The 1987 recording by Bernard Haitink with the London Philharmonic is spectacular, and the TR-5 S2 thrills with its combination of delicacy, detail and pace. From the opening *Lento Allegro* onwards, to the magnificent sound of massed orchestral strings and cor anglais that follows, it shows its fine breeding. It's incisive and revealing without ever descending into harshness, and possesses a fine sense of spatiality. The recorded acoustic hangs relaxedly around and behind the plane of the speakers, never coming out to punch you in the face, yet it invites you

to peer ever further inward and rewards with loads of low-level detail, air and space. Instruments are very well located and the sound remains consistent even at high volumes. Only a slight lack of dynamics at higher levels marks it down, but all small boxes compress things to a certain extent. Also, some might find the subtle bass warmth an unwelcome addition, but with anything less than high-end sources I doubt it.

Conclusion

The TR-5 S2 is a slightly quirky design, but none the worse for it. This is a smallish box with real ability and charm. It's a great performer at the price, offering a degree of sophistication that few would dare to expect from a sub-£1,000 product. Yet it's not just all about good manners, because it has real zap to it, infusing the music with energy and emotion when called upon. It's a real slice of budget esoterica, something that performs way better than expected, and which can be hung on the end of far more high-end systems if needed. There is nothing not to like ●

Hi-Fi Choice

OUR VERDICT

- SOUND QUALITY**
★★★★★ **LIKE:** Sophisticated and musically satisfying nature
- VALUE FOR MONEY**
★★★★★ **DISLIKE:** Limited low bass response
- BUILD QUALITY**
★★★★★ **WE SAY:** Superb small standmounter with a grown-up sound
- EASE OF DRIVE**
★★★★☆

OVERALL

