



SE Electronics

**MusicTech**  
RECOMMENDED  
★★★★★

# REFLEXION FILTER

A controlled acoustic environment is essential for general-purpose recording, but once that acoustic foam is stuck to the wall, you won't get it off! **Huw Price** finds another solution.

#### KEY FEATURES

- Semi-circular absorber and diffuser
- Fully adjustable stand bracket
- Movable microphone mounting stalk

#### REFLEXION FILTER

Manufacturer **SE Electronics**

Price **£229**

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The Reflexion Filter is a semicircular structure with various sound-absorbing and diffusing layers and panels that wraps itself around the back and sides of a microphone. It works in two directions: the source sound is contained to control the number of soundwaves bouncing around the room, while reflected soundwaves reaching the back and sides of the microphone are minimised.

If you've ever bought self-assembly furniture from Ikea or MFI you'll experience a familiar sensation when you open the Reflexion Filter's box and remove the contents. You get a series of rudimentary monochrome line drawings and all the necessary tools are supplied – in this case, a spanner.

The mounting bracket is daunting in appearance and weight, so be warned that you'll need a very sturdy microphone stand – preferably with meshing teeth – if you want to set the Reflexion Filter at an angle. It'll also need a wide footprint to prevent it toppling over – especially if you use it

in combination with a weighty microphone. Despite its agricultural aura, the mounting bracket is actually well-designed considering that it performs several functions.

It has to lock onto variously sized stands, which it manages securely with two thumbscrews. A lever adjusts the angle of the Reflexion Filter and a second lever frees up the Reflexion Filter itself. This allows for height adjustment, so that any microphone capsule ends up in the centre for optimum effect.

A really clever feature is the sliding runway that enables the integral 12.5cm microphone mounting stalk to slide back and forth. This accommodates a wide selection of microphones with both side- and end-fire capsules. We were able to achieve the required positioning with small condensers such as an Oktava MC-012 as well as behemoths like the Neumann CMV563 with an M9 lollipop capsule. When you're swapping microphones, you have to remove only the sliding pole that attaches to the mic clip – the Reflexion Filter and the mounting bracket can be left in position.

#### On the bounce

We decided that the most effective way of testing the Reflexion Filter was to make comparison recordings with and without it using a variety of microphones and various acoustic spaces. For the first test we set up a

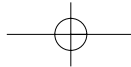
CMV563 with an M9 omni capsule in our partially treated listening room and recorded an acoustic guitar. We didn't expect a seismic change in ambience in this fairly dry room, but we certainly heard a more intimate sound, with a small increase in bottom end and volume – even though the mic amp was left unchanged.

In many recording situations an omni mic will produce the truest sound, but the trade off is that you'll get more of the room sound – whether you like it or not. So, the Reflexion Filter could broaden your opportunities for omni recording when ordinarily it wouldn't be an option.

Next up was a figure-8 Coles 4038 ribbon mic in a very ambient space with a bright reverb characteristic. We placed the mic exactly 55cm away from a guitar amp to get a blend of dry signal alongside plenty of room ambience.

Once again the Reflexion Filter lived up to its billing by reducing room ambience, but to our ears the sound became a little coloured in the low mids. The Reflexion Filter recording certainly sounded less natural than the recording we made without the filter, and we noticed that there was less snap and definition on the low strings. All things considered, we preferred the figure-8 response without the Reflexion Filter on both acoustic and electric guitars.

The most obvious application for the Reflexion Filter is vocals. Voices can sound somewhat lost in big



acoustic spaces, but they can sound even worse in boxy vocal booths. Location recording can also present difficulties as it's almost impossible to control the acoustics, leading to wildly varying results.

For our last test we picked the worst acoustic space we could find – the studio toilet. If the Reflexion Filter could cope with notoriously poor bathroom acoustics, it would be a winner. With this in mind we set up a Red Type B fitted with a cardioid capsule and started performing a series of vocal tests.

## THE REFLEXION FILTER IS A PORTABLE ACOUSTIC TREATMENT PACKAGE THAT REALLY WORKS.

The improvement in tone and intelligibility was dramatic. The Filter didn't eliminate the room acoustic, but it controlled it to the point where it actually framed the tone of the vocals very nicely. The sound was infinitely smoother and better balanced, with a thicker and more full-bodied tone.

### Bring up the bass

We were curious about the increase in bottom end that was apparent in many of our Reflexion Filter test recordings.

Examining the product closely we discovered that each of the four interior panels produced a clear and sustaining note when tapped with the end of a finger. The two outside panels produced a deep tone tuned to within a whisker of a low E on a guitar – much like an 808 kick drum – while the two middle panels were closest to F#.

Could the panels be introducing a little resonance to the tone? We carefully tuned an acoustic guitar to the outside panels and recorded a piece in that key with and without the Filter. Once again, the volume and

bass content of the Reflexion Filter recording was higher, but any possible colouration was tolerable. There's a bit less definition, but some sources might benefit from a little fattening up. It's also more subtle than the proximity effect you encounter when you are forced to record everything close-up to minimise unwanted room tones.

The Reflexion Filter was designed to solve the problem of unwanted room ambience – and it's very successful.

## Measuring Up

Compared to a room treatment package such as the Auralex D36 (£165), the Reflexion Filter is a good deal considering that you can use it anywhere to control and shape the recording environment. The Auralex Expander Kit (£49) contains several spill-reducing foam mic surrounds and two mic stand isolators, but they don't surround the mic's sides and any attenuation won't be full range.

However, it can also be used creatively with various pickup patterns to shape and control the ambient content of your recordings. And if you're working on-location – particularly if you're recording speech – the Reflexion Filter could be a lifesaver. **MTM**

### METHOD SPOT

So, how does it work? A layer of punched aluminium diffuses ambient sound waves from the room before they reach a layer of absorbent wool and a layer of aluminium foil, which dissipates low-frequency energy. The waves cross an air gap to another layer of wool, continuing through a second punched aluminium layer. The main absorber has four formed panels of an unspecified acoustic material attached to its inside surface. These absorb and then diffuse the soundwaves from the source as they pass to the main filter.

### SUMMARY

#### WHY BUY

- Looks superb
- Controls any acoustic environment

#### WALK ON BY

- A bit cumbersome
- Awkward to adjust
- Slight low-end colouration when used with omni and figure-8 mics

### VERDICT

The Reflexion Filter is a portable acoustic treatment package that really works. An exciting product.

