

Rycote InVision

They're the last thing many would think about yet they represent the fundamental point of contact for every microphone used. **JON THORNTON** discusses the microphone clip and mounts his mic InVision.



There's always a danger that amid the regular announcements of new and exciting outboard, microphones, software, (More software. Ed), computers, consoles (tick whichever box floats your particular boat), all of that audio bling can distract you from remembering that the more mundane aspects of equipment can sometimes be just as important. Microphone mounts are a case in point, although admittedly there have been few groundbreaking developments here recently (an exception being Enhanced Audio's rather fine M600 solid mount).

Broadly speaking, microphone mounts fall into two broad categories — fixed clips and suspension mounts. The use of the latter is quite obviously to isolate the microphone from structure-borne (predominately low frequency) vibration so that it only picks up the sound you want it to. And with the exception of shotgun microphones on the end of booms (for obvious reasons), suspension mounts are almost exclusively the preserve of large diaphragm, side-addressed microphones. That seems strange as there's nothing innate in the design of stick type microphones that makes them magically more immune to these sorts of problems.

These thoughts had clearly occurred to the folks at Rycote, a company best known for the manufacture of windshield and suspension mount systems for location recordists, but not a name that is quite as well known in your average studio. That may be about to change with Rycote's InVision suspensions. These are designed to offer a discreet, compact solution to suspension mounting a variety of small diaphragm microphones — ranging from compact types, such as the Schoeps CCM series, right through to standard short to medium bodies 'stick' condensers, and even the ubiquitous SM57. In addition, they also feature some rather clever new approaches to achieving that suspension.

Most elastic suspensions are just that — a variety of takes on the use of elastic or rubber in solid 'doughnut' arrangement, as found on a lot of boom solutions, or the 'cat's cradle' arrangement found in most studios. The solid doughnut works well and allows a good degree of isolation without too much

'slop' in terms of where the microphone is pointing, but can have some effects on the microphone's pick-up pattern and frequency response. The cat's cradle suffers a lot from slop, which is even more of an issue when positioning stick microphones, and is rather fragile to say the least. They're also not as effective at low frequencies as they might be, as they need to be tensioned relatively highly to damp their movement. And all suspensions have their own resonant frequency, at which they will tend to amplify movement rather than suppress it, and they only really start to perform properly at about three times this resonant frequency.

The InVision design takes a different approach by exploiting the properties of a flexible polymer called Hytrel (*Sounds a bit Middle Earth to me. Ed*). This material is extremely flexible and has what's known as a 'shape memory' — in other words it will restore itself to its manufactured shape even after significant force has been applied. The InVision suspensions achieve their performance primarily by the convoluted shape of what they term Lyres, made from Hytrel. (*Aha, the Lyres of Hytrel. Ed*). This allows significant displacement

in the critical front-to-back axis of movement, but with much tighter control in the other axes, minimising slop. The material itself also damps smoothly and maintains these characteristics down to extremely low temperatures. The net result is that, even with very low mass microphones, the resonant frequency of the assembly can be 8Hz or less, meaning that the suspension is fully effective across the frequency range of the microphone.

The mounts come in a series of sizes, featuring two of these Lyre structures of different sizes into which the microphone body clips. The different sizes also feature different spacings of the Lyres to accommodate different microphone types, and different profiles for microphones to clip into — including a specific profile for the rather unusual shape of the Sennheiser MKH series. Regardless of type, the mounting bar arrangement is attached to a swivel, which incorporates a standard thread adapter for fixing to a microphone stand. With what is quite a bewildering range of options, Rycote has thankfully provided a handy tool on its website that will determine the appropriate model of suspension for a particular microphone.

They work very well indeed. Using the INV-7 for the most part, which fits the AKG C451, DPA 4011 and Earthworks SC20 used in the evaluation, the suspension did an admirable job. In a very unscientific test involving tapping the mic stand and judging the effectiveness of the suspension, it did a better job than a traditional cat's cradle arrangement. There's also a sense in some applications (particularly when tracking drums) that the increased isolation tightens up the LF response considerably. As suspension systems they certainly do their job.

But maybe the best thing about these clips is the fact that they're relatively cheap (UK£30 + VAT) and seem almost indestructible in everyday use — you can bend that Hytrel stuff every which way you like and it won't snap (*It's from the Mines of Moria I tell you. Ed*). The larger models are suitable for boom mounting and studio use, the smaller ones only for studio or installation purposes. The same technology also now features in the company's range of windshield and suspension systems. I'm hazarding a guess that the name Rycote may well start to become as familiar in the studio environment as it is in the great outdoors. ■

Contact

RYCOTE, UK:
Website: www.rycote.com

PROS	Price; almost indestructible; very effective suspension mounts.
CONS	Variety of different types could be confusing (but the website helps enormously).
EXTRAS	Rycote is best known as windshield manufacturer. Its lightweight suspension and windshield system — the S-Series — claims excellent wind suppression and vastly enhanced usability.

Comprising a one-piece web suspension made entirely of flexible, lightweight plastic, the design eliminates the need for elastics and is engineered to fit all diameters of microphone from 19mm to 25mm. A 'pinch release' allows the user to change the position of the suspension in an instant. The windshield itself features a twist-lock system attaching it to the chassis ring for quick, easy release and the acoustic fur covering is integral and provides no drop in performance with >30dB wind suppression.

Other features include an XLR cable with Neutrik NC3 connectors and the new pistol grip handle as standard. S-Series is priced between the Softie and Modular Windshield Systems and is available immediately.

