Undercovers & Stickies - Logic of the design

Taken from www.Rycote.com

Clothes rustle comes from the movement of the mic capsule relative to something else - fabric, body hair etc. If there are clips attached to the mic these also catch on things and generate noise too.

So the idea here is to anchor the capsule firmly to at least one surface and thus eliminate one element of movement. Some people try to stick the second layer too (say, mount mic on skin and stick shirt to skin too) but this makes clothes lie oddly and everything gets tugged around so hard that it generally fails as a technique.

Instead, the Undercovers are meant to allow the second layer to run across the face of the capsule as smoothly as possible and so generate very little noise. By using as soft a fabric as possible and giving it a clean, smooth curve over the face of the mic (no clips) this is feasible. Having no clips obviously helps this too.

To make this work well the Stickie needs to be on the rougher surface - that could be hairy skin, or coarser cloth - and the smoother surface should be the one that glides over the Undercover. So the choice of skin-in, blouse-in, jacket-out etc needs to be done per occasion. You also need to make sure that the fabric patch covers all the Stickie otherwise the clothing will tack to it and then pull off again, generating a lot of noise.

The size of the Stickies is really governed by what is a practical compromise. For B6s some reckon it is too large, for COS11s a little short. Generally people don't like them too big.

Cable noise is very dependent on cable type - and that varies immensely with what the manufacturer provided and also how it's been used. Cable sheath material can pick up sweat, loose plasticizer and become dramatically stiffer over time. Anchoring the first few mm on the stem of the Stickie certainly helps a lot. Others swear by tying a small knot in the cable an inch or so down from the capsule. Use a second Stickie to pin the cable if necessary (but cover it to prevent clothes "picking").

Suspending tiny capsules is not an option, sadly. For a start it is hard to keep them free from contact with clothing unless the housing space is excessively large - and secondly simple physics rules it out. The mass of these capsules is minute so the compliance needed to isolate them at any useful frequencies is enormous. In practice omni’s are not very sensitive to acceleration so fixing them securely to clothing turns out to be the best method of "suspending" them.

Noise reduction on personals is very hard but you should get a noticeable benefit on most occasions.

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