



Shure KSM137 & KSM141 : March 2003

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Capacitor Microphones

Reviews : Microphone

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Two new small-diaphragm mics from Shure provide solid all-round performance with an extended low-end response.

Paul White

While large-diaphragm mics get all the glamorous press, there are roles better suited to small-diaphragm models, such as the recording of many types of acoustic instrument. There are already numerous excellent mics of this type from the familiar big names in the microphone business, as well as a number of capable budget models using capsules from Russia and the Far East, but Shure have pitched their two new models at the serious end of the market and they are priced accordingly. The simpler of the two models is the KSM137, a fixed cardioid-pattern, 'end address' (which simply means you point the end at the instrument, not the side) back-electret capacitor microphone intended for both live and studio applications. Recommended applications include the close-miking of acoustic and electric instruments, drum overheads, brass/woodwind, ensembles, and even bass instruments such as double bass and kick drum. The KSM141 is similar in most respects, but is switchable between omni and cardioid polar patterns.

The Hardware

The KSM137 features an extremely thin, low-mass gold-sputtered diaphragm (a mere 2.5 microns thick), which helps achieve a good transient response, and this is teamed with a low-noise, low-distortion Class-A transformerless preamp. Quality components have been chosen for the onboard circuitry, and all connectors, both internal and external, are gold plated to maintain low contact resistance.



The Shure KSM141 dual-pattern capacitor microphone.

Shure
KSM137/KSM141
£382/£505

pros

- Smooth, even tonality.
- Good bass extension and SPL handling.

cons

- Relatively expensive.

summary

These two new models from Shure are both extremely nice microphones, but they face a lot of strong competition.

A recessed, three-position low-cut switch is provided to counter proximity effect and to reduce the level of low-frequency noise where applicable, though the circuit also includes a subsonic filter to attenuate frequencies below 17Hz, usually caused by mechanical vibration. Although the frequency response starts to roll off below 200Hz, this is very gradual and is only 5dB down at 20Hz, which means there is plenty of sensitivity available for recording low-frequency sources. Other than the low-end roll-off, the response is essentially flat up to 20kHz and beyond, with the gentlest of presence humps centred around 8kHz. A further three-position Pad switch gives 0dB, 15dB or 25dB of attenuation for when working with very loud sound sources. As standard, the mic (which measures just 20mm x 122mm) comes with a standmount and a protective plastic case.

The KSM141 is unusual in that it offers a choice of cardioid or omnidirectional polar patterns, yet it uses a single-diaphragm capsule. Normally a dual-diaphragm arrangement is used for multi-pattern mics, but in this case the designers have developed a mechanical switching system that closes the rear porting vents of the mic, thus changing it from a pressure gradient (cardioid) mic to a pure pressure microphone (omni). I don't know how this is achieved internally, but the mechanism is activated by moving a knurled ring on the mic body between two positions. It is important not to leave the ring set midway between the two settings, as the results will be unpredictable and probably undesirable. Other than that, the low-frequency filter and pad are identical to those fitted to the KSM137 and the same 2.5-micron diaphragm material is also used. In fact looking at the spec sheet, it seems that everything other than the capsule switching system is identical to the KSM137, even the



The rotating collar of the KSM141 allows you to switch between omni and cardioid polar patterns.

cardioid frequency response and the list of recommended applications. The omni response, by contrast, has a slightly broader and higher presence peak and the low-frequency sensitivity actually rises by a couple of decibels down at 20Hz.

In Use

Both mics sound predictably similar in cardioid mode and have a very neutral character with a smooth top end. The high degree of bass

extension means that if you were to try to record vocals through them, you'd have to use a proper pop shield, but, although they work perfectly well with vocals, they're more likely to be used for instrument work. I checked the mics on a number of sources, including using a matched pair of KSM141s as drum overheads — a task they managed with no problems. In some situations, a mic with a more hyped top end may be appropriate, but if you need smoothness and honesty, then both models fit the bill nicely.

Used in omni mode, the KSM141 retains its natural, open tonality, but it suffers a noticeable amount of high-end loss when the sound source is behind the mic. This is true of many omni models, but given that this one is relatively expensive I thought it might have fared slightly better in this respect.

It's quite difficult to review this type of mic, as it has no obvious sound to describe, but there's no denying that both models are high-quality products, both in terms of construction and performance. The extended bass end is useful when working with bass instruments, while the smooth high end makes easy work of avoiding harshness or shrillness. The design offers a good balance of low noise, good sensitivity and high SPL handling, but these are fairly expensive mics that have to compete in the UK with established models from companies who are more closely associated with capacitor mic manufacture. Although Shure have been making high-quality capacitor mics for a long time, there's a tendency for people to think of them only as the guys who make SM57s and SM58s! Still, marketing the mics isn't my problem, and I can tell you these are both good general-purpose microphones for those jobs best suited to a smaller-diaphragm model. They have no really outstanding characteristics, but then that may be their outstanding characteristic! **SOS**

information

£ KSM137, £381.88; KSM141 £505.25; KSM137 matched pair, £752; KSM141 matched pair, £987. Prices include VAT.

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The Shure KSM137 fixed-cardioid capacitor microphone.

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