



DPA 4099 Live Instrument Microphones

SIMON ALLEN forewarns any users of the versatile and flexible 4099: be prepared for the bare, honest truth of your sound.

DANISH MICROPHONE MANUFACTURER DPA has a well-earned reputation for producing some of the best microphones on the market alongside other top names in the business. It has managed to hold its own in the market by providing microphones that consistently produce that particular DPA clarity, a true representation of the source sound that is natural and rich with plenty of presence. Having now worked at City Studios (www.citystudios.com) in Cyprus for two years where we have a large range of some of the best DPA mics, I am very used to them, their sound, and applying them to different applications everyday – and, I hope, successfully!

I was keen to try out the new range of instrument-specific 4099 applications, both as fan of DPA, and due to my interest in acoustic instruments and music that spans from western to eastern acoustic sounds.

Overview

Clip microphones are one of those very simple yet ingenious ideas like the invention of the wheel. The distance between the microphone and the sound source will stay the same as the musician moves, allowing the proximity effect and phasing to remain stable. This means variable factors of the sound are less, and therefore the result is more closely down to just the musician's performance, allowing him or her to feel

comfortable and able to express their playing with ease and control.

The range of DPA 4099 instrument mics all have the same microphone capsule, but with different clips for mounting on many instruments from guitars to drums. They have a high SPL rating, which is very important not just for drums but to be able to absorb the many frequencies, harmonics, and resonances of acoustic instruments. The frequency response of the microphones is from 20Hz-20kHz, but at +/-2dB from 80Hz to 15kHz with a 2dB boost around 10-12kHz. This is typical DPA data and lends itself well to the amplification of acoustic instruments in live sound reinforcement.

The 4099 crucially is a supercardioid mic. This means for use on the stage it provides high gain before feedback and good isolation from other instruments and sounds. It also allows better control when recording musicians together in the same room with separation, and reduces the effect from the space where the recording is taking place. It does however mean that the sound will change a lot depending on the position of the microphone in relation to the instrument.

The mics are fixed to a boom/goose neck, which is a good length and easily positioned, but also rigid enough to hold the position during performance. After the boom is the cable and microdot connector. The mic, clips, and boom are very sturdy, but the cable and connector look to be a little more delicate. However, I have used the



THE REVIEWER

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Wind sections mounts for the 4099 take advantage of its high SPL handling.

requires phantom (+48V) power. For the sets that are on bass instruments, a different connector is supplied without the 80Hz cut. This microdot connector is very clever, as nearly any connection can be made after the mic such as straight into wireless mic transmitters.

Each kit comes in a strong case with the mic and cable as one, the appropriate XLR connector, and the clip for the instrument. The sets are labelled for; Double Bass, Cello, Drums, Guitar, Piano, Sax, Trumpet, Violin, and a universal clip, but each clip can be used on many instruments – for example the guitar clip can also be used on the Dobro, mandolin, and more. The clips are very easy to use, small, lightweight, and strong, and adjustments don't need to be remembered.

In The Studio

These mics are essentially designed for the live scene but are great for studio work too. For example, when recording many instruments at once in one room such as a string section, ensemble, or Jazz group, who I find often prefer to be together to get the right feel. However, I think it is also essential to try most new pieces of equipment out in the studio simply because it is a controlled environment that I know well.

We can all be biased one way or another: either live or studio, but let's face it, sound is sound. Yes it's different working in the studio compared to the stage but it's the same principles, and I find the translation between the two insignificant when trying to understand what I am listening to.

I feel there are two main applications that test microphones to their limits. One is obviously drums, but the other is the grand piano.

At City Studios we have a full size Steinway & Sons Grand D Piano and the first time I tried these mics out was during a piano session for the Cypriot Eurovision song for this year. I have

- lavalier microphones from DPA that employ the same cable and connector and used them as part of a location film audio unit under heavy use, and have had few problems. The cable is surprisingly strong, easy to hide, and is very lightweight to help minimise any weight imbalance that clip on mics might cause. The whole piece is very lightweight, and the musicians who tried these mics with me commented on this and how the instrument was still comfortable to play.

The microdot connector allows the mic to be easily connected with about 35 different connectors available from DPA. This includes the standard XLR connector that comes with each set. For most sets this also employs an 80Hz high pass filter to reduce handling and wind noise, making the 4099 a standard balanced microphone that

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For studio ensemble and live work, the innovative instrument range is ideal.

► recorded acoustic piano with many different mics and set-ups, and in order for them to 'cope' with an acoustic piano the 4099s tend to be the most versatile. The piano isn't particularly loud unless played very hard, but when miking the instrument from inside with close mics, for a certain sound or for the stage, the sound pressure can be quite high. This is due to the effect of the sound board and body of the instrument and with the amazing amount of frequencies and harmonics given from even a single key. This is why I have found in the past that you tend to require a mic that has a very high SPL rating over a mic that is very clear. Some very sensitive and clear mics actually don't give the best sound because the picture can become cloudy, and you end up taking too much out with the EQ to compensate.

However, the 4099 was great on the piano, evidently with its high SPL handling and inherent clarity, giving the best of both worlds. Something that I liked very much was the difference in sound when changing position of



A miniature gooseneck is an ideal mounting and position aid.

the mics – particularly the distance between the two, as the stereo image could be very wide or narrow due to the supercardioid pattern. In the studio, compared to other mics that I regularly use, I thought it lacked some warmth, although the sound was immediately close to the finished result. The low end was there, it was just out balanced as the presence was high, which can be great for some songs and actually hard to achieve when you want it. I also know, however, that the sound would have been very good for a live setup with a PA system, giving a very clear and natural sound without too much 'ringing'.

“The result was amazing: I had a really clear picture that was very easy to balance and, unlike most acoustic shows, demanded very little compromise.”

On The Stage

I had the opportunity to use the mics on a local concert in Cyprus with traditional instruments such as a variety of percussion, Oud (like a lute), and Ney. The result was amazing: I had a really clear picture that was very easy to balance and, unlike most acoustic shows, demanded very little compromise. The mics gave me everything up front without anomalies or resonances. I simply used a little EQ to get a slightly harder sound, and I was able to play with the sound, rather than try to clean it and improve it. On the Oud, the presence was amazing and so much detail from the player carried across the room, I just reduced the very high frequencies a little to compensate for the plastic sound given from the stem of a feather, which they use here as the plectrum for some pieces. The gain before feedback was very high compared to using other mics, and of course having the mic mounted on the instrument meant the level and tone was consistent.

During sound check, it was clear that the microphone delivered and the easiest way to find the best sound that the musicians were looking for, was the positioning. A slight change ►

► made noticeable differences more effectively than EQ and it was a pleasure to experiment. The musicians also liked the sound very much and enjoyed playing with the mics so much that I think one is on order. There was one small issue with the clips, as even though the DPA clips are a very good and fit well on to many instruments without marking, it wasn't the case for the Oud or Bouzouki. These instruments have a round back to the body so we did use a little tape! Perhaps there will be a solution soon.

As an engineer, they are very true sounding and a musician will find that when playing amplified with these mics the sound of the instrument is the same, just louder. It is wonderful that technology is continuing to make such massive improvements. Ironically though, for some this could be a problem. For instance, here in Cyprus with Greek and Turkish music and other Arabic and Asian influences, amplification for some of the most traditional instruments has been around for years, starting with the earliest technologies such as coil pick-ups. However, this has developed so much and has been the norm for so many years that it has become part of the sound of the instrument. The natural acoustic sound of these instruments can almost be clouded by the tone from these original amplification techniques to give what people today now 'know' the sound to be.

DPA has done so well with these microphones that some will not appreciate the brilliant truth of the sound, especially the musicians themselves. They will be looking for the 'amplified' feel that they are used to even if what they like isn't 'correct', so might not be able to appreciate the excellence of the 4099 microphone. Blending a pick-up sound with these microphones will help for some and also aid in providing even more gain before feedback and a tighter sound.

Conclusion

I am really impressed with these mics. There are many basic principles employed by the 4099 clip microphone series that are presented in a very well thought-out product that gives a great result. The 4099 has that well known DPA sound, and fits right in on DPA's product list with many



Above: A mic stand that never gets kicked over.

Below: So that's what that bit is for ...



accessories and options to suit a huge range of instruments and players. The sound is very clean and easy to use with a very finished feel before post production or processing. Positioning of the mic is crucial but this should be viewed positively to allow you to find your sound. This is a product that you can work with, not a product that will work you as a musician or an engineer. Be prepared to hear what your instrument really sounds like! **AM**

INFORMATION

Ⓜ GB£385.00 (exc.VAT)

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Simple, fast mounting with no marks.

