

DPA d:vote 4099G and d:vote 4099D Instrument Microphones

One microphone design to capture the world?

by Phil O'Keefe



Have a look at the mic box that a live sound company brings to a gig, or a decently well-stocked studio mic cabinet, and you'll probably find a wide variety of different microphone models. That's because no single mic is ideal for every type of sound source. However, some mics come closer to that ideal than others; they exhibit uncommon flexibility and work well on a surprising number of different things. DPA's d:vote 4099 series is designed to be just that kind of versatile mic. These microphones are available in normal and low sensitivity versions and with a range of very clever mounts that are designed to enable them to work with a wide range of instruments. We're going to focus on two in this review - the d:vote 4099G, which is designed for use with acoustic guitars, and the d:vote 4099D, which is designed for use on drums.





What You Need To Know

- All of the offerings in the DPA 4099 series use either a normal (6 mV/Pa; -44.5 dB Reference: 1 V/Pa [Nominal, +/- 3 dB @ 1 kHz]) or a low sensitivity version (2 mV/Pa; -54 dB re. 1 V/Pa [Nominal, +/- 3dB @ 1kHz]) of the same basic mic - other than the sensitivity, the mountings and instrument clips are what differentiate the various models in the series.
- There are several different mountings available, including models designed for drums, guitar, piano (4099P), accordion (4099A), upright bass (4099B), cello (4099C), saxophone (4099S), trumpet / brass (4099T), woodwinds (4099U) and violin (4099V). There is even a clamp-mount version (4099CM) and a version that is designed to work with regular mic stands (4099SM).
- Most of these come bundled with the normal sensitivity version of the d:vote 4099, except for the versions intended for very loud sound sources, such as trumpets and drums.
- The 4099 is a really small mic that is only about 5.4 mm in diameter, and a mere 45 mm long. This is great for stage use since they're visually unobtrusive.
- The 4099 series uses a small diaphragm pre-polarized condenser capsule with a supercardioid pickup pattern. This is mounted deep inside a small interference tube, which sits inside of a small replaceable foam windscreen.



- The windscreen sits inside a pair of rubberized rings, which are attached to a gooseneck with rubber shock mounts. The capsule and mounting assembly is both sturdy and light, and the mounts are replaceable if they ever wear out.



- As you'd expect with condenser mics, the 4099 series require phantom power for operation.
- At 0.08 pounds / 1.27 oz, the weight is all but insignificant, and I doubt anyone would really feel the difference with the unit attached to their instrument.
- The DPA d:vote 4099 features high SPL handling capability, and can be used on sources with SPLs of up to 142 dB for the normal version, and a whopping 152 dB for the low sensitivity model.
- A 6' cable and 5.5" gooseneck is included with each DPA d:vote 4099. The gooseneck attaches to the various instrument adapters with a push-down metal collar that locks over a matching rubberized area on the instrument clip, which holds it firmly in place. This design allows you to adjust the positioning and length of the gooseneck very easily.





- The included cable is thin (1.6mm) and terminates in a DPA "MicroDot" connector.



- The MicroDot connector is compatible with some wireless systems, and with the addition of an adapter (a variety of which are available from DPA) the 4099 will work with practically any wireless system.



- DPA includes a MicroDot to XLR adapter along with the d:vote 4099G and 4099D models; the one for the 4099G (model # DAD4099-BC) has a built-in belt clip and 80Hz high pass filter to reduce stage / room rumble and potential

feedback issues.

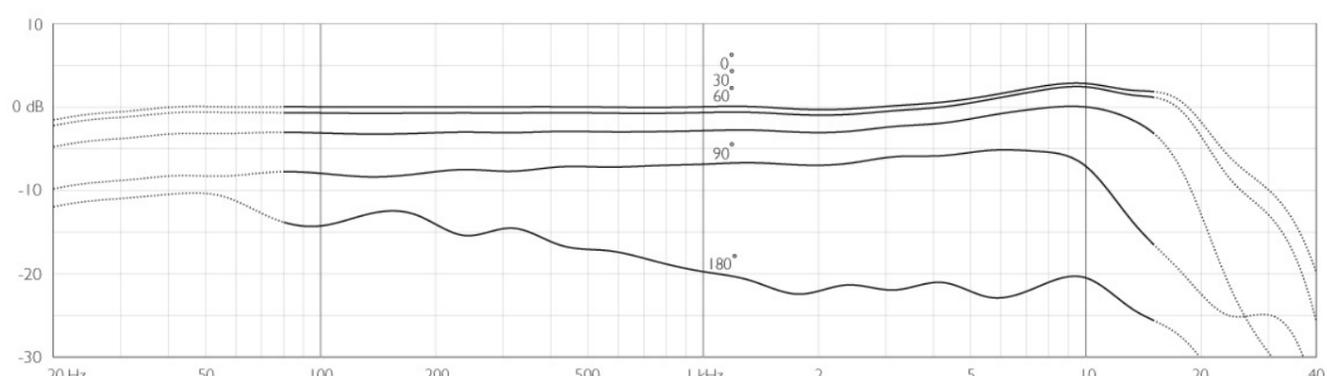
- A beefier (2.2mm thick) cable is also available as an option.
- The output impedance of the 4099 is around 40 ohms for the MicroDot connector, and around 100 ohms for the XLR.
- Signal to noise is rated at 71 dB (A-weighted; 66 dBA for the low sensitivity model), dynamic range is 100dB (95 dB for the low sensitivity model), and self noise is rated at 23dB (A-weighted; 28 dBA for the low sensitivity model) .
- I tested both the low sensitivity d:vote 4099D with a drum clip and the d:vote 4099G with the guitar clip. The guitar clip is designed to work with Dobros, mandolins, ukuleles and similar instruments with a body depth between 1.4" to 4.8".
- The instrument clamp for the guitar version uses a nylon, plastic and rubber stick-shaped ratcheting mount that has three rubberized contact points that clamp to the top and back of the instrument. Attaching and detaching it is very easy, and it holds in place fairly well for the most part.



- Like the guitar version, the instrument clip for the drum version is rubberized. It easily clips directly to the rim of your drums. From there, the gooseneck gives you plenty of positioning flexibility for the capsule, and the whole thing is well isolated from vibration and shocks.



- All of the mounts for the d:vote 4099 series are designed to treat your instrument with care and DPA says they will not harm delicate finishes. My own tests seem to bear this out - I noticed no marks or any sign that the microphones were ever mounted to my instruments, even after repeatedly attaching them, using the instrument, and then removing the mics.
- Also available is a 3.15" gooseneck extension ([\\$99.00 "street"](#)), which can come in handy for placing the mic more distantly than the stock 5.5" gooseneck allows on its own, such as when miking up the lower bout on an acoustic guitar. While the 14th fret position is recommended when using a single mic, you may wish to run two when recording so you can capture the acoustic guitar in stereo.
- Gain before feedback is almost always a concern when using instrument mics live, but the 4099 does very well in this respect, in part due to the tight and consistent supercardioid pattern, but also due to the ease and consistency of the mic placement and their close positioning to the sound source. Feedback is even less of an issue if you use IEMs instead of floor wedges.
- The sound quality of both microphones was stellar, with each providing a very natural and detailed representation of the miked instrument. The frequency response is relatively flat, with only a minor 2 dB boost in the 10-12 kHz region that gives just the right amount of detail and presence to the sound without any harshness whatsoever.



- When I first tried the d:vote 4099G I was immediately impressed with just how natural it sounded and how easy it was to get it set into the best sounding position for each of the acoustic guitars I tried it on. Likewise, the 4099D drum version is drop-dead simple to attach and position, making it a piece of cake to

experiment with placement - and it's just as easy to get great sounding results with them as it is with the d:vote 4099G.

- All versions of the d:vote 4099 come with both a semi-hard protective storage case as well as a storage bag.



Limitations

- The way the end of the "stick" mount on the 4099G sticks out past the back of the instrument may be annoying for some players, and can be accidentally bumped during performances, causing the mic placement to move, or even for the mic to become unattached from the instrument. It may be possible to "clip off" the excess length, but for obvious reasons I didn't attempt to do so with the review unit. Doing so will limit the usefulness of the clamp to guitars with the same body depth or shorter than the one you had it mounted to when you measured and clipped off the extra length, but since replacement mounts are available relatively inexpensively (around \$35), that may not be a significant issue for you.
- The design of the 4099G's mount makes it difficult to use on the treble side of guitars equipped with a cutaway.
- The included cable may be a bit longer than many people need, especially if they're using the 4099G along with a wireless transmitter.
- Self-noise levels are a bit high, but will not be a significant issue in many cases, especially live. It can be a bit more of an issue in the studio, but in most situations you probably won't find it too objectionable.



Conclusions

The sound of the DPA d:vote 4099 is consistent with my impressions from previous experiences with other DPA microphones; it's a detailed and very accurate sounding mic that doesn't color the sound in any significant way, but rather captures and conveys it honestly - doubtless due in no small part to the microphone's admirably flat frequency response, with the very modest +2 dB boost at 10-12 kHz adding to their excellent detail and articulation. This sonic neutrality and accuracy makes the 4099 a very flexible mic. With the d:vote 4099 series, DPA have succeeded in designing a great sounding microphone that works admirably well with a wide range of sound sources. It's also cool that they make a lower-sensitivity version for very high SPL instruments like drums, and that they offer the various mounting clips for sale separately. If you already have a few d:vote 4099D and d:vote 4099G mics, adding some new mounts will allow you to use them on various other instruments besides drums and guitars too. That can be a big advantage for live sound companies who

need to maintain flexibility for their varied clients.

Placement is exceptionally easy for the most part, and since the mics are held reasonably securely in position by their attachments, you usually only need one hand to reposition the gooseneck and capsule to get them into just the right spot that gives you the optimal sound. With close positioning and the effective supercardioid pickup pattern, gain before feedback is also really good, and that is crucial in live situations, which is really what these microphones were designed for. While they might not be the quietest microphones you'll ever encounter (which is true of many small diaphragm condensers), don't overlook their usefulness in the studio too. For both live and studio use where you're dealing with a musician who is known for their animated, motion-filled performances that make it nearly impossible for them to remain in the ideal place relative to a stationary, stand-mounted mic, the 4099G can be a godsend... and the natural sound of the d:vote 4099G simply blows away the sound of onboard piezo pickups in terms of detail and realism.

While a kit's worth of 4099D's are far from inexpensive, their small size and the simple, yet effective mounting clip make it super-easy to set them up without having to find room for your mic stands amid the forest of drum and cymbal stands, and the sound is very good on each kit element. They really shine on snare and toms, and while I still prefer a large diaphragm dynamic for kick, the 4099D also handled that task fairly well in my testing too. While I wouldn't recommend them for use as distantly-placed overhead mics, they even make good spot mics for cymbals and hi hats, although you'll want to get the optional mic stand mount (4099SM) for the 4099 if you plan on using them for that. Since I didn't have one available, I improvised by using a couple of Velcro strips to strap the 4099's gooseneck to the end of a boom mic stand, which actually worked fairly well as a temporary alternative.

In conclusion, I was very impressed with both the d:vote 4099D and d:vote 4099G. I'm sure both will be very popular with touring musicians and live sound companies, and I suspect we'll see more than a few of them showing up in recording studios too. Flexible, adaptable, and great sounding, they're exceptional mics that are very worthy of your attention and deserving of an audition, no matter what instrument you play, or where you play it. **-HC-**

Editor's Note: Shortly after publication of this review, DPA announced CORE by DPA - a significant upgrade to the d:vote 4099 microphone series with a slightly reshaped windscreen, minimized distortion specs and increased dynamic range. For all the details on Core by DPA, please [check out this link in HC News](#).

Want to discuss the DPA d:vote 4099D and 4099G microphones, or have questions or comments about this review? Then head over to [this thread in the Live Sound & Production forum](#) right here on Harmony Central and join the discussion!

Resources

DPA d:vote 4099D / 4099G instrument microphones (\$619.95 each, "street")

DPA's d:vote 4099 series [product web page](#)

DPA's d:vote 4099G [product web page](#)

DPA's d:vote 4099D [product web page](#)

You can purchase the DPA d:vote 4099G from:

[Sweetwater](#)

[Guitar Center](#)

[B&H Photo Video](#)

[Musician's Friend](#)

You can purchase the DPA d:vote 4099D from:

[Sweetwater](#)



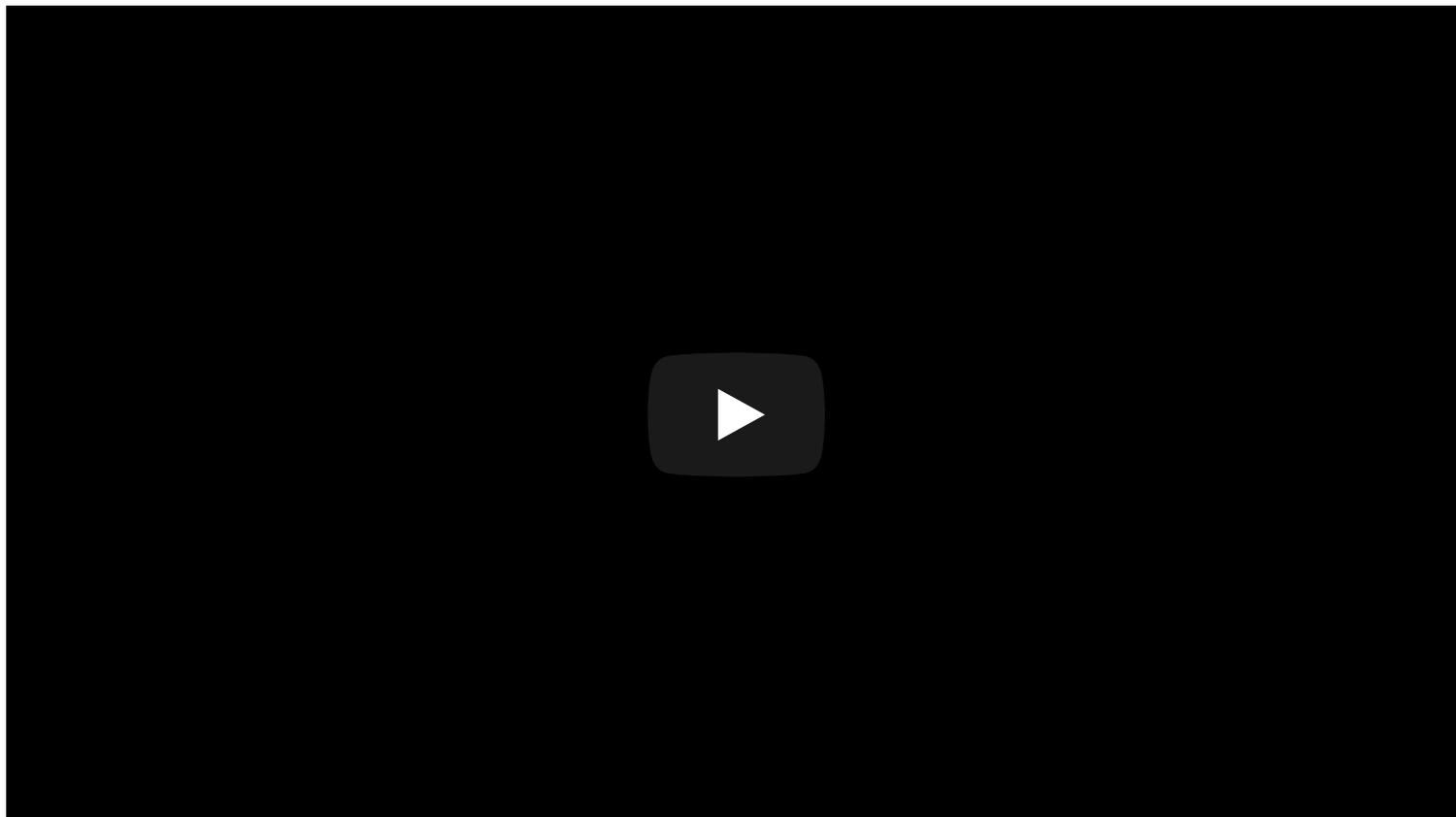
Dennis Chambers (d:vote 4099D)



How to mic an acoustic guitar (d:vote 4099G)



How to mic a drum kit (d:vote 4099D)



***Phil O'Keefe** is a multi-instrumentalist, recording engineer / producer and the Senior Editor of Harmony Central. He has engineered, produced and performed on countless recording sessions in a diverse range of styles, with artists such as Alien Ant Farm, Jules Day, Voodoo Glow Skulls, John McGill, Michael Knott and Alexa's Wish. He is a former featured monthly columnist for EQ magazine, and his articles and product reviews have also appeared in Keyboard, Electronic Musician and Guitar Player magazines.*