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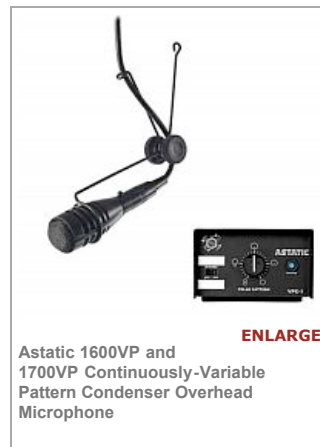
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Audio Review: Astatic 1700VP Microphone

Continuously-Variable Pattern Condenser Overhead Microphone

by John F. McJunkin

The use of a suspended microphone in the church environment is not uncommon. It's a handy tool to capture a pastor's voice, a choir singing, or ambience from the congregation. One drawback of suspended microphones, however, is that if they are permanently installed, making adjustments to them can be a little tricky. It's downright impossible if the adjustment must come in the middle of a service. For instance, a suspended mic might be used to capture a scripture reading by someone standing in a very specific location, and a nice tight cardioid pattern works very well for this application. But a moment later, that same suspended mic may be employed to capture a small choir that has taken the platform, but a tight pickup pattern simply won't do – a much wider pattern is necessary. It's not practical for someone to bring a ladder, climb up to the mic, and change out an element to arrive at a wider pattern. Astatic Commercial Audio has introduced a microphone that largely solves this difficulty.



Astatic 1600VP and 1700VP Continuously-Variable Pattern Condenser Overhead Microphone

The Astatic 1600VP consists of mic element, which ships with a control box, a 30-foot cable, an XLR wall plate, an articulating steel hanger, and anti-twist thread and rods for suspension. The Astatic 1700VP is the designation of a kit that includes the 1600VP and Astatic's MB-1, which is a miniature overhead carbon fiber boom stand, specifically intended if the 1600VP can not be suspended. To get into specifics, the mic element is less than two inches in length and 3/4 inch in diameter in a nice matte black finish, with a taper from the tip down to where the mic connects via a TA3M connector. This condenser mic exhibits a frequency response from 40 Hz to 20,000 Hz with a sensitivity of -29 dBV @ 1Pa and an impedance of 135Ω. Its self-noise is a nice low 22 dBA, and it can handle SPL of up to 110 dB (@1%THD – 1 kHz.) The big practical wow factor of the mic is that it is continuously variable throughout the polar patterns. A remote provides a knob that adjusts the pickup pattern continuously from figure-eight to hypercardioid to supercardioid to cardioid to omnidirectional (clockwise around the knob.) One feature of this variable nature that truly impressed me is the remarkable consistency in its frequency response regardless of polar pattern. There is a bump of approximately 6 dB centered between 6 and 7 kHz, but the response is otherwise quite flat, and doesn't change much at all when the pickup pattern is altered. This makes the mic exceptionally useful in the church environment.

As mentioned earlier, it's difficult if not impossible to quickly or easily change out a mic element if it's suspended 12 feet above the platform. Having the capacity to easily change the pattern of a suspended mic is a game-changer. As in our previous example, the mic could be dialed down to a tight cardioid to pick up a single presenter at one moment, and then broadened out to a near omni pattern to accommodate a choir or a small ensemble of acoustic instruments and/or vocalists. And when the frequency response is consistent regardless of the pattern, the engineer can just twist the knob and not have any worries over changing EQ in order to compensate.

The Astatic VPC-1 control box is a black steel box 2-7/8 inches by 1-5/8 inches by 4-9/16 inches. On its front panel is found its singular knob that adjusts pattern as previously described. To the left is a recessed slider switch that engages the mic's 80 Hz, 12 dB/octave high-pass filter, and to the left is a status LED to indicate proper connection and phantom powering of the mic. On the rear panel is the I/O – male and female XLR connectors to get signal in and out of the box. The XLR's are three-pin using standard microphone cable from the microphone head to the control box. The box is intended to be rack-mountable together with numerous controllers – up to six at a time – in Astatic's

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RU1 rack-mount shelf. This makes for really nice remote control of an array of suspended mics by a front-of-house engineer. Additionally, when these boxes are rack-mounted, a security panel can be employed to prevent unauthorized adjustment of mic patterns.

The 1600VP ships with an articulating steel hanger, an XLR wall plate, rods, and anti-twist thread. These can be used together to suspend the mic from the ceiling and have a clean XLR connection at the ceiling, not just a wire emerging from a hole. The mounting hardware looks nice and works well for positioning the mic exactly where it's needed. The 1600VP kit also includes a 30-foot two-conductor shielded cable which is terminated with a TA3F connector on one end, and a male XLR on the other. The total cable length between control box and microphone can be up to 2000 feet. In addition to the hardware included as part of the 1600VP kit, the 1700VP kit includes an MB-1 carbon fiber boom. This boom is 56 inches in length and includes a 3/8-inch gooseneck at the business end, and mounts in a hefty rotating clutch that mounts on a standard 5/8-inch, 27-threaded mic post. The boom is finished in a glossy black urethane, and due to its light weight (even with the mic capsule mounted) can be easily extended to its maximum length with no worries of tipping. The wow factor of this boom is that it features TA3 connectors at both ends, so the signal is actually passed through the body of the boom, which is RF shielded to reduce interference. Actually, the entire system is engineered to be highly RF resistant, and meets the European Union RF standards.

I have previous experience with an Astatic podium microphone, which I found to sound great. The 1700VP does as well, with all the high-end resolution one would expect from a condenser mic, but steady, consistent performance all the way down to the low end. The 80 Hz, 12 dB/octave rumble filter very effectively eliminates low-end rumble from air conditioning or kinetic rumble transferred through the mic stand.

I recorded both male voice and singing children with the mic, and was very pleased with the results in both cases.

As to the pick-up patterns, don't expect the narrowness of a shotgun mic in hypercardioid mode – it is not that tight – but it does nicely narrow the pickup pattern to isolate a single presenter nicely. And of course, care must be taken in full-out omnidirectional mode because feedback could be an issue.

Ultimately, that's what's really nice about this mic – the fact that one can reduce or even eliminate feedback by dialing in the exact pickup pattern necessary for the application. I would definitely recommend taking a look at this mic if you're in the market for a suspended microphone.

John McJunkin is the CEO of Avalon Podcasting in Chandler, Arizona, which offers high quality podcast production and consultation services to a broad range of clients. He's also the host of the Podcast Pro Tech & Tips Podcast at www.avalonpodcasting.com.

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