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Meyer Sound ULTRA-X20 Compact Wide Coverage Loudspeaker

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With this smaller sibling to the Ultra-X40, Meyer Sound continues to expand its Ultra Series.

Sometimes smaller is better. The Ultra-X20 kind of looks like a big UPM (another mainstay of the Meyer Sound product line). Larger than the UPM but smaller than the UPJ-1P, it weighs in at 27lb and is just under 7.5" wide, a bit more than 19" tall, and a little more than 8.5" deep. That's about half the weight of the Ultra-X40.

A three-channel, Class D amplifier provides 860W peak total output power (which is the maximum unclipped peak voltage that the amp will produce into the nominal load impedance).

Three versions are available: The Ultra-X20 that provides 110° by 50° coverage via a rotatable Constant-Q horn, the Ultra-X22 provides a narrower 80° by 50° coverage through a rotatable horn, and the Ultra-X23 delivers wide coverage (110° by 110°).

The internal components of the Ultra-X20 comprise two 5" cone drivers in a concentric driver configuration and a 2" diaphragm-compression high-frequency driver mounted to a rotatable horn—just like the Ultra-X40, only smaller. Meyer espouses the concentric driver setup over a coaxial configuration. Benefits include reduced distortion from both the high and low drivers, no thermal interaction between the drivers, and no Doppler effects due to the movement of the low-frequency cone.

Metal music

Aside from size, another major difference between the Ultra-X20 and the Ultra-X40 is the material used for the



The Ultra-X20's front grille removes easily to access the rotatable Constant-Q high-frequency horn.

enclosures. The Ultra-X40 uses birch multi plywood and the Ultra-X20 makes use of aluminum (covered in a lightly textured black finish). There have been fiberglass and composite enclosures from other manufacturers before, and many column line arrays (as well as Meyer's CAL column array loudspeaker series) utilize aluminum enclosures, but this is the first system of this ilk that I've seen (and heard). Other aluminum cabinets in Meyer's

product line include the MM-4XP and the UP-4slim.

It's a very clever design, and certainly beefy. It comprises four parts: the top and bottom plates, the front baffle, and the main enclosure. According to Meyer, aluminum was chosen for a number of reasons, including aesthetics. It allows the sides of the enclosure to be slightly curved and provides other advantages: It helps with heat dissipation and the

wall thickness can be reduced (compared to a wood enclosure) without compromising any stiffness. Actually, the thickness of the enclosure walls is about five times less than $\frac{3}{4}$ " plywood, though it varies since stiffener elements are used to help damp any resonances. A simple knock on the cabinet verifies this. The aluminum cabinet also serves to improve the power-to-size ratio of the system. The grille is perforated powder-coated steel.

The amplifier heat sinks take up approximately half of the rear cabinet real estate with the remainder being I/O and power. Input is three-pin XLR female with a looping male XLR output connector. Meyer offers an optional five-pin XLR connection that provides balanced audio and RMsServer (Remote Monitoring System) signals for active monitoring of the speaker's performance parameters via Meyer's Compass software. For the weather-protected option, XLR Neutrik TOP connectors are used, which are heavy-duty sealed connectors designed to maintain an IP65 water-tightness rating.

Performance specs between the Ultra-X20 models are virtually identical, with slight differences in linear peak SPL; of course, the major difference is coverage. All three versions provide the same frequency response of 65Hz to 17.5kHz (plus or minus 4dB). The Ultra-X20 attains 127dB with a 20dB crest factor, when measured with Meyer's M-Noise. Crest factor is the difference between the peak and average levels of a signal. In this case, crest factor measurement data provides information regarding the ability of the loudspeaker to reproduce transient and sustained sounds. For reference, Meyer also publishes its SPL measurements with pink and B-noise. Pink noise is used throughout the industry for transducer measurements. Meyer developed B-noise and M-noise as sources that would more accurately represent what the loudspeaker would be required to reproduce in performance situations.

As with the Ultra-X40, remove two screws at the top of the grille and two screws at the bottom and you can easily remove the frame from the speaker. Changing the aspect of the rotatable high-frequency section involves four more screws at the corners of the horn and that's it. There are two threaded M8 rigging points on the top and bottom of the speaker, one in the center, and one justified near the rear of the cabinet. There are also four M6 threaded mounting points, embedded in the heat sink assembly, that allow the use of third-party wall and ceiling mount adaptors. Optional rigging and mounting accessories include the MUB-X20 U-bracket, MYA-X20 yoke, and MTC-X20 pinnable top channel (which allows for adjustable hanging from a single point). For pole mounting, there is the MPK-POLE pole kit and the PAS-M8 adapter sleeve (for adapting to a 35mm pole). The four M6 threaded points are for accommodating third-party wall mounting units.

While the Ultra-X40 retains the iconic trapezoidal shape that runs through the product line, the Ultra-X20 sports slightly curved sides. I suppose using aluminum for the enclosure allows for this profile.

The three-channel amplifier section utilizes Meyer's Intelligent AC, which provides auto selection of the correct operating voltage (from 90 to 265V AC 50 to 60Hz, the safety-rated voltage range is 100 to 240V AC). Other features of Intelligent AC include soft-start power up, EMI (electromagnetic interference) filtering, and high-voltage transient suppression. Power is provided via Neutrik PowerCon 20 input and looping output connectors. One of the cool features of this system is how efficient it is. The maximum instantaneous peak current draw is 3.5A peak at 115V AC. The maximum long-term continuous current draw (greater than 10 seconds) is 0.9A rms at 115V AC. All this translates into up to 15 Ultra-X20s working off of a single 15A 115V AC circuit

A compact point source loudspeak-

er such as the Ultra-X20 has applications in a wide variety of production situations, including corporate, meeting, and convention AV; houses of worship; conference rooms; education spaces; and theatres, as well as portable PA when matched with a subwoofer such as the USW-112P. The Ultra-X20 can also perform as a key component in multichannel immersive system applications, such as with Meyer's Spacemap Go.

High-quality audio

There are many great-sounding loudspeaker systems available these days, so the competition is really stiff. Performance and usability (how easy it is to use in a practical setting) are important factors. It has to sound good; that's a given. But how easy is it to use, to mount, rig, or otherwise deploy? How easy is it to get up and running? In the case of the Ultra-X20, just place the speakers where you want them, plug in AC and signal, and you're up and running. There is a basic simplicity that I appreciate. There are many loudspeakers out there with various switches and selections available on the I/O panels, and while that flexibility is great when you are talking one or two speakers, with a large system you need consistency in all of the units' performance.

Unfortunately, there are currently few opportunities to use loudspeakers designed for live performance in a practical application. Auditioning the system in my home office space would have to suffice. Fortunately, it's a good-sized room (approximately 12' by 12') so I can get some space between the speakers and my ears.

The low end, while not extended, was certainly there; besides, that's what they make subwoofers for. The mids were solid and the highs were very detailed without any trace of brassiness or stridency. I could listen for extended periods of time with no fatigue. I spent a fair amount of time listening to a recording of George Duke playing an acoustic grand piano



The concentric driver configuration



Ultra-X20 rear. Note the four M6 threaded points for third-party mounting accessories.



Top plate with two M8 threaded points for rigging



I/O panel with looping XLR and PowerCon connectors



Perforated steel grille

Mostly, I spent time listening to source material that fell into the operating frequency range of the speakers. That included voices and acoustical instruments, as well as some brass and wind instrumentation. Even with material that had content with frequencies that extended below what the Ultra-X20 could handle, the low-mid attack of the kick drum, and punch from a bass guitar, was there, still very defined.

The thing that I really like about compact point source speakers is that they can be used in so many ways. The Ultra-X20 can be used on its own as a small PA or, when combined with additional units, you can scale up and make a larger system. They can also be used to supplement a larger system as front fills and down fills or used as near fields at the front of house in a large-scale system or a remote mixing position. They are certainly good enough to use in a critical listening situation, particularly when paired with the companion USW-112P subwoofer.

In addition to the three versions, Meyer offers the Ultra-X20XP, an externally powered, 48 VDC model. Pricing information for the Ultra-X20, accompanying accessories, the USW-112P subwoofer, as well as the other versions, is available through your local Meyer Sound purveyor. 📶

that was recorded with the mics running straight to the digital recorder, with no equalization or processing. Just the piano and the acoustics of the room, which happened to be a

church in Northern California that had been used many times for recording acoustic piano and other acoustic instruments and ensembles. The definition and detail was outstanding.