



JBL EON 515XT

A 'classic' returns, with better sound quality and less weight.

Text: Mark Woods

▶ JBL has produced almost one million EON speakers over the last 15 years, and countless thousands of them are still in use. Many of them are road-weary, battered and bruised but they keep on working. When first released, the EON changed the way users looked at small PAs, by providing a plug-and-play alternative to stacks of black boxes, amps, crossovers, EQs and compressors. Easy to transport, loud enough for many small front-of-house applications, and with a 15-inch woofer that could take a fair amount of kick drum, the JBL EONs have proved popular with bands, venues, hire companies, educational facilities and rehearsal rooms the world over.

With this year's release of the new third-generation EON '515XT' speaker, JBL has improved the design again, this time with new looks, better sound quality and more convenient operation. The result is a speaker that's quieter at idle, louder at full volume and much lighter to carry.

BIRTH OF A NEW EON

Physically, the new EONs have a more contemporary look, and despite the fact that my wife initially thought I'd bought us a new heater, I reckon they look more like the suitcases you see being wheeled through airports. Come to think of it, a couple of little wheels and a slide out handle would make them even easier to move around.

Made from black polypropylene, the front is rectangular with rounded corners. The sides are almost egg shaped, with moulded feet so the speaker can be laid on either side for monitor duties. The cloth-backed, powder-coated steel grille that covers the front of the cabinet has the letters 'EON' prominently displayed (too prominently for mine) between what looks like a set of cat's whiskers, but which

are in fact horizontally-finned bass ports. If that's not enough branding, there's an optionally illuminated JBL logo near the bottom.

BACK & SIDES

The rear panel is dominated by a large heat sink above a recessed control panel. The large handles on the top and sides are well placed and comfortable to use. Five M10 rigging points also provide flexible suspension options and there's a standard 36mm pole-mount with locking screw.

Hidden inside the cabinet is a 15-inch, dual two-inch voice coil low-frequency driver and a 1½-inch diaphragm, neodymium compression driver, crossed over at 1.7kHz. Power comes from a Crown Hybrid Class-D amplifier delivering 525W to the woofer and 100W to the horn. The frequency response is quoted at 42Hz – 18kHz (±3dB) and the plot shows a dip between 2kHz – 4kHz as the main deviation from flat. This makes sense as it helps to avoid harshness for music playback and matches the presence peak in most vocal mics, to give vocals an essentially flat response that sounds accurate and maximises gain before feedback. In response to suggestions from users, JBL has increased the input sensitivity of the EON 515XT by 10dB relative to previous models. The line input is comparable to other active speakers but the mic level is quite high, so care needs to be taken to avoid feedback when setting a level. Maximum SPL has been raised 3dB to a very loud 132dB.

INS & OUTS OF THE EON

The controls and connections on the back panel allow for a variety of input and output options. There are three inputs channels: two balanced or unbalanced TRS ¼-inch jack sockets and one combo socket, each with its own

volume pot. These are mixed internally to a single XLR output socket via shelving EQ knobs that offer $\pm 6\text{dB}$ of adjustment at 200Hz and 4kHz. These input options will be familiar to users of the EON G2 version and cover most requirements, but personally I'd rather have seen one of the 1/4-inch inputs act as a second combo connector, mainly so that two microphones could be connected to the cabinets; any more than that and you'd probably need a separate mixer. A recessed button switches the input of the XLR socket between mic and line level, and this control can only be accessed by poking something in the buttonhole. These switches can be like land mines if you accidentally switch to mic level with the speaker already operating at high levels, so it's certainly good to have the switch recessed... but it's also inconvenient having to find a poker whenever you do want to change the setting. Many other active speaker brands have the switch placed so it's *too* easy to engage accidentally. A compromise could involve having the switch safely recessed but still able to be operated without a separate tool.

There's another recessed button on the rear panel that selects the source of the signal sent to the XLR output socket. In the 'mix' position the output gets a blend of the input channels in the normal manner. In the 'loop' position, however, the output gets only the signal from the combo connector input. If you were using an external mixer near one speaker you could connect the left channel to a 1/4-inch input and the right channel to the combo connector input.

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Switched to 'loop', the output socket can then be connected to another speaker with a mic lead to create a stereo system. Of course, you could connect the L/R desk outputs directly to each speaker but the 'loop' output allows you to make a stereo system even if you only have short leads from the desk outputs.

LIGHT AS A FEVVA

In use you'll find you like the speaker well before you hear it. Picking it up made me smile. At 14.8kgs this is the lightest 15-inch active speaker I know and it's really easy to put in the car, carry and lift onto a stand on your lonesome. The weight savings have come mainly from lighter driver magnets and new amp modules that produce less heat and require smaller heat sinks. The cabinet is not too big either and its dimensions of 673mm x 406mm x 368mm are about

as compact as they can be given the size of the components.

On a speaker stand, and pointing at the audience, the 515XT looks modern compared to the earlier models and unobtrusive in basic black but I didn't find it a particularly good looking speaker either... a case of 'eye of the beholder' I suppose. The light in the JBL logo makes it look... well, active... but in some situations it's distracting so it's certainly handy having this extinguishable via a rear-panel switch. Another detail I appreciated was the inclusion of a three-metre IEC power lead with a piggyback plug. Sometimes the short kettle leads supplied with active speakers hardly reach the ground when the speaker is on a stand, and it's annoying to always need an extension lead to get the speaker going.

Cranking up the EON 515XT with a common vocal microphone gives a favourable initial impression with a voicing that's strong and clear across the midrange. It's resistant to feedback at high levels, with the horn eventually becoming unstable around 3kHz with an SM58, but it's quite susceptible to feedback around 125Hz when the mic is behind the speaker. Most performances take place well behind the speakers, of course, but for small shows where bands are mixing themselves, the mixing console is often close to the rear of the speakers and in this configuration I found this feedback sensitivity disconcerting when checking the mics and setting levels. All active speakers make some noise when idling and it was a common criticism of earlier versions of the EON that they were noticeably noisy. The 515XT has addressed this and while there's still some hiss up close it's unlikely to be noticed in normal use.

BETTER VOICING

The new EON's overall voicing is very good and much improved over the previous models, which could sound harsh at medium to high levels. For music playback at low volume the highs and lows are somewhat subdued but a little loudness-type EQ can be applied if they're being used in a background music setting. At higher volumes the 515XT develops more body, and can be run very hard before the sound starts to deteriorate. For music playback at high levels they sound a little bass shy, and for best results in situations that need full-range sound, a separate sub should be used.

The coverage pattern is quoted as 100° horizontal x 60° vertical, and when used in the upright position the 515XT is well controlled across a wide arc in front of the cabinet, with little on-axis beaminess. Used as floor monitors the coverage changes more noticeably as you move across the front of the cabinet, and there is more of a sweet-spot right in front of the horn. The cabinet can be placed on either side so the horn can be on the right or left, so it should be possible to position it on stage to give the best result, especially with a fixed mic position.

JBL has made some significant improvements to what was already a class-leading product and the changes will only enhance its appeal. The new lighter weight is a big plus yet the EON 515XT feels as strong as its predecessors and I trust it will cope with the rough treatment these speakers inevitably receive. This is the best sounding EON speaker yet and its retail price of \$1399 (with a two-year warranty) offers good value for a speaker that can be used for live sound reinforcement, music playback, instrument amplification or floor monitors. ■

NEED TO KNOW

Price
\$1399 each

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Pros
Excellent sound quality.
Light weight.
Efficient design.
Three-channel mixer.

Cons
Awkward mic/line switch.
Only one mic input.
'Subjective' looks.

Summary
The EON is probably the most widely recognisable 15-inch two-way cabinet in history and the legacy certainly continues via the new 515XT. They're lighter than before, better sounding than before and cheaper than before, so they're unquestionably better value than ever, and destined for broad acceptance by the market.