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KLEINE BOX, GROSSER SOUND

Die aktive Electro-Voice ZLX-12BT mit Bluetooth-Feature



THE BEATLES
The White Album
Wie sich die Beatles
1968 neu erfanden

English VERSION

ACTIVE PA SPEAKER

✦ Electro-Voice ZLX-12BT

Small powerhouse

The speakers from the ZLX series have been upgraded to include a useful new function. The popular speaker models are now also available with Bluetooth. We took the new ZLX-12BT to our test studio and tested it under the toughest conditions. We have taken a close look at which other new features of the ZLX-12BT score highly from a user's perspective.



with big sound

Since the founding of Electro-Voice more than 90 years ago, the US company has made a name for itself in the audio industry, especially when it comes to its speakers. This is due not least to the strict self-imposed requirement that only internally developed components should be used in their speakers. This applies not only to the drivers, but also to the wave guides and the speaker cabinets. Electro-Voice has always been at the forefront, particularly in the highly competitive field of portable and universal full-range systems - in the past offering passive systems, such as the classic S 15-3, which weighed in at a whopping 99 pounds (45 kilos). The powered ZLX series currently offers two attractive speakers, which come in both 12-inch and 15-inch versions with integrated amplifiers. The 15 inch version weighs just 38.1 lb (17 kilos). Thus, the new ZLX model with a 15 inch speaker weighs merely one third of the S 15-3 - despite the additional weight of the amplifier.

Pleasingly lightweight

When lifting the ZLX speaker, the first thing you notice is its pleasingly modest weight of just 35 lb (16 kilos). Even for just one person, the ZLX-12BT is easy to transport and can be mounted on high speaker stands without major effort. A 1.38 inch (35 mm) flange in the base also makes the speakers easy to mount on stands, while a convenient safety screw can be tightened by hand to prevent accidental twisting. If the ZLX speaker is placed upright on the floor, four large rubber feet ensure that it is well insulated from the ground and will stay

TECHNICAL SPECIFICATIONS

› Product type	Powered full-range PA speaker
› Enclosure design	Bass reflex housing, black polypropylene
› Front grille	Perforated sheet steel 0.05 inches (1.27 mm), black powder-coat
› Woofers	EVS-12K, 12 inch woofer (300 mm)
› HF driver	DH-1K, 1.5-inch compression treble driver
› Frequency response (-10 dB)	50 Hz to 20 kHz
› Max. SPL	127 dB
› Coverage	90° x 60° (H x V)
› Amplifier rated output	1000 W, Class D
› Connectors	2 x XLR/combo jack inputs, 0.14 inch (3.5 mm) stereo jack input, XLR output, Bluetooth receiver
› Power supply	100 to 240 V, 50 to 60 Hz, 0.5 to 0.8 A
› Dimensions	610 x 356 x 356 mm (H x W x D)
› Net weight	34.4 lb (15.6 kg)



Superior protection: the narrow-gauge perforated steel grille keeps the speaker well protected

still, even with a powerful bass sound. A slight backward tilt of just a few degrees optimizes the transmission angle and ensures that the full spectrum of frequencies can be enjoyed, regardless of the listeners' distance from the speakers. There is no negative impact, even from placing the ZLX-12BT on an additional subwoofer, raising its position slightly. Additional accessories, such as a weatherproof gig bag or a wall or ceiling mounting bracket with adjustable speaker angle, make the ZLX speaker even more flexible, so that it is also ideal for fixed installations in clubs, multimedia areas or conference rooms.

When used in a horizontal position, the backward tilt of the ZLX-12BT housing makes it ideal as a personal floor monitor. The perforations in the steel panel on the front grille feature an offset brick-style pattern. The grille is backed with a fine wire mesh with the silver EV logo as the only decorative element. The white status LED underneath indicates if the speaker is switched on and can also be deactivated via the DSP controller on the back, if desired. The matt black powder coating of the speaker cover, along with the matt black polypropylene housing, gives the ZLX-12BT a stylish finish. A material thickness of 0.05 inches (1.27 millimeters) of the perforated sheet steel ensures that an occasional kick will not do permanent damage to the speaker and the ZLX-12BT will retain its good looks for

years to come. Three well-dimensioned handles recessed in the housing on one long side and the two short sides ensure convenient handling. All connections and controls are conveniently located on the back of the housing.

In-house development

The ZLX-12BT and its big brother, the ZLX-15BT, are the only speakers in their class to combine EV-built drivers with a specially designed Class D amplifier module and powerful DSP. In addition, high-quality Bluetooth streaming offers unprecedented mobility and flexibility of use. Both ZLX speakers feature the SST (Signal Synchronized Transducer) technology developed by

Electro-Voice. EV has posted a video on its website that explains SST in simple terms. Electro-Voice's patented SST technology is all about using a specially shaped horn to balance the runtime differences of the two drivers (high and low frequencies) as much as possible in order to achieve the following features and advantages:

- A smaller speaker cabinet without any concessions in terms of sound quality
- Accommodating a larger horn in small housing, thereby achieving better control over the dispersion pattern
- Extra space to accommodate a bass reflex channel below the horn for deeper bass reproduction
- Minimized distortion and static soundwaves within the speaker (self-resonance behavior)

1,000 Watt Class D Power

Designed for the ZLX series, the 1,000 Watt Class D amplifier combines high output with the best possible energy efficiency in the smallest space possible. Such high output power is remarkable for a speaker of such small dimensions. Even its digital signal processing, referred to by EV as QuickSmartDSP, is impressive, both in terms of scope of performance and its straightforward one-handed operation via rotary encoder and illuminated display. The following specific parameters can be modified using the DSP control:

- Input level and master volume control via level meter in the display.
- Presets for the general use of ZLX loudspeakers (music, live, speech, club).
- Selection of five user-programmable presets.
- Presets for the setup mode (monitor, pole, suspended, tripod)
- Crossover for optimal sound adjustment when using a sub-woofer
- Sonic adjustment using a two-band equalizer



Horizontal positioning:

Of course the box can also be utilized as a floor monitor.

The display enables the visual monitoring of the status indicator of the integrated, automatic limiter, the input level, and the master volume control to optimize the amplification structure. The input sensitivity of the two XLR/combo jack inputs can be precisely adjusted by means of additional, individual controls, which also brings us to the connection options for the ZLX-12BT. In addition to the high-quality Bluetooth receiver,

» *Exceptionally high performance with relatively small dimensions.*«

which allows music to be streamed in stereo from any mobile phone, tablet or MP3 player with a corresponding Bluetooth function, the speakers of the ZLX series also provide connections for wired devices. Specifically, these include a 0.14 inch (3.5 mm) stereo mini-jack input to which the smartphone or tablet can be connected as an alternative to wireless Bluetooth streaming, for example via the headphone output with a cable.

In addition, two XLR/0.25 inch (6.3 mm) combo jack inputs with individual input sensitivity controls allow the two master L/R outputs of a mixer to be used with both microphone input cables and 0.25 inch (6.3 mm) cables. Alternatively, these two inputs can also be used for direct connection to dynamic microphones and/or instruments, such as an acoustic guitar with electric pickup. The bandwidth of the input sensitivity control really ranges from delicate microphone signals to the strong signal of a fully controlled mixer desk output – with very low inherent noise. A mix of all input sig-

In total there are three handles on the speaker: one on the long side, two on the two short sides.



nals, whereby the input level control also affects the volume on the XLR output, is available at the balanced XLR output of the ZLX-12BT for forwarding to another powered speaker. This output is also used to relay the other stereo channel of the Bluetooth stereo signal, which can be activated accordingly via the DSP control. The exact structure of the DSP control with the respective displays can be found in the detailed operating instructions.

Packs a punch, not just for rock n'roll

That's enough boring theory for now. Now let's listen to what the ZLX-12BT sounds like in real life. Does the theoretical 127dB maximum sound pressure actually provide enough punch? In order to find out, we connect the supplied power cable with the loudspeaker's power socket. We switch on the loudspeaker at the power switch next to the input, clearly indicated by a status LED that lights up in white on the front and blue on the back. With easy to follow operating instructions, we have no trouble using Bluetooth to connect our iPhone to the speaker, successfully pairing the devices on first attempt. Using a microphone cable, we attach the output of the speaker connected to the phone to Input 1 of the other ZLX-12BT – we then connect this to the power supply and switch it on. As requested by the user manual, we muted the master volume control on both speakers and increased the volume on the phone until the display of the paired ZLX box showed the required 75% in the Bluetooth line (BT). It was at that point that we increased the volume on the master volume control of the

two ZLX-12BT, initially to about room volume, and walked back and forth from left to right in front of the speaker. A significant loss of high frequencies was audible outside the specified acoustic dispersion angle of 90° x 60° (H x V). This only became clearer after the volume was increased. Within the dispersion angle, however, the two ZLX speakers produced a truly powerful, balanced and natural sound with a deep, dry

All connectors are located on the back.



bass reproduction and a silky yet crystal-clear high-end. The sound resolution in the mids was surprisingly good and very detailed for PA speakers. This was particularly noticeable in distorted electric guitar sounds, so lovers of heavy rock sounds á la AC/DC should be more than satisfied/ should be getting their money's worth with these speakers. A test with pieces of music from other genres always led to the same, very good result. Various other test set-ups, for example connecting input

» *The box sounds much bigger than it actually is.*«

1 and 2 to the L/R outputs of our studio mixer, or the connection of a dynamic Shure SM57 to Input 1 and an Ovation acoustic guitar with pickup to Input 2, went smoothly and only confirmed our opinion in terms of sound. The sound equalization is audible and effective, both in the four fixed presets, as well as via the two-band EQ.

Conclusion

The ZLX-12BT certainly has all it takes to become another classic like the S 15-3. It has more than enough power, together with an intelligent DSP control and, above all, a full, open and very natural sound that the ZLX seems to produce effortlessly, making the box sound much bigger than it actually is. A very good price/performance ratio, combined with the many good features included in the ZLX series, mean that these speakers will continue to be the standout stars in the Electro-Voice product line, not least thanks to the addition of the Bluetooth receiver.

✘ Michael Hennig

AT A GLANCE

> **ELECTRO-VOICE ZLX-12BT**

> **Sales** Bosch EVI Audio, www.electrovoice.com

> **Price (RRP)** EUR 534.31

> **Rating**

- ▲ High-quality Bluetooth audio streaming
- ▲ EV-patented, signal synchronized transducers (SST) with waveguide design
- ▲ 1,000 Watt Class D amplifier output with DSP control
- ▲ Can be used both vertically and horizontally as a monitor
- ▲ Beautiful finish and elegant design

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