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MAGAZIN FÜR BÜHNEN- UND STUDIOEQUIPMENT



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Electro Voice ELX200
PA-System



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Electro-Voice ELX200 Series with QuickSmart app remote control

by Markus Galla

When they hear the name Bosch, some people without doubt, think of power tools. But this time we're not in an episode of the "Tool Time" from the TV show "Home Improvements" and we're not testing a Binford 8200 chain-saw. As I open the packing to reveal the secret of the large Bosch Communications logo, my neighbors watch curiously from behind the garden fence, just like Wilson. Thankfully, they avoid the know-it-all remarks that Wilson always had up his sleeve for Tim Taylor. It's all very simple really: even though it says Bosch on the side, what's inside is Electro-Voice, or, to be more precise, loudspeakers from the new ELX200 series.

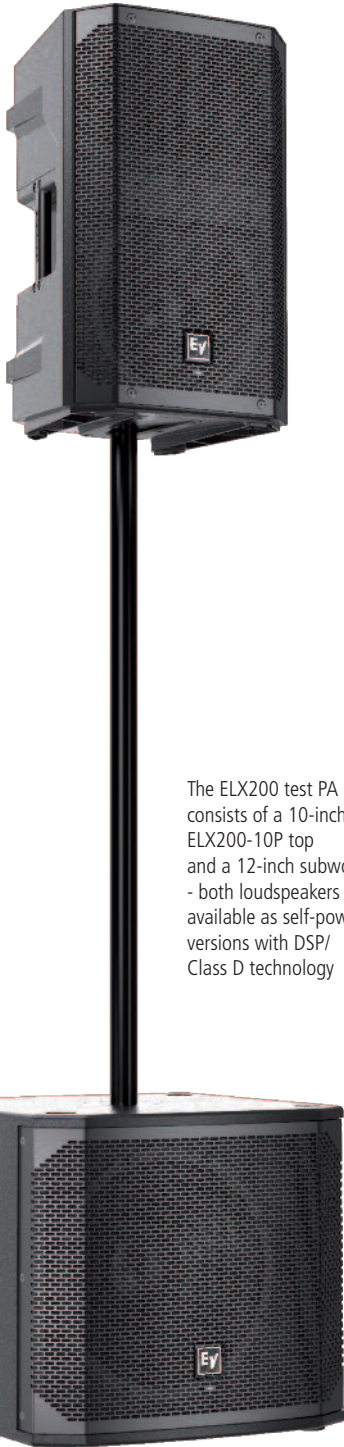
US manufacturer Electro-Voice is known to many musicians and sound technicians for its speakers and microphones. Who could forget the heavy-duty Eliminator 1, or the RE20 microphone fondly compared with a certain part of an elephant's anatomy? The company was originally founded as a specialist radio store in 1927.

According to company legend, the name changed after the delivery of one of the first "PA systems" to a well-known football coach, who used it to amplify his voice in training sessions, calling it his "electric voice". The decisive name change to Electro-Voice followed in 1930 in a move to intensify the development of speakers and microphones. The rest is history. Electro-Voice

joined Bosch through Telex Communications, which acquired EV in 1998. If you want to know more about Bosch and its more than 450 associated companies, you should set a little time aside. Such Internet research is always interesting when you're dealing with a globally active company.

ELX200 speakers

EV pitches its new speaker series between the already familiar ZLX and EKX series. There are five active and five passive models to choose from and are available in 10-, 12- and 15-inch two-way boxes and 12- and 18-inch subwoofers. Compact, lightweight, superior sound - these are the factors that EV uses to appeal to musicians. The composite enclosures for the



The ELX200 test PA consists of a 10-inch ELX200-10P top and a 12-inch subwoofer - both loudspeakers are available as self-powered versions with DSP/Class D technology

high/mid tops and wooden cabinets for the subwoofers are perfectly matched with the drivers, presenting the listener with beautifully modulated sound.

Features include, class D amplifiers and DSPs, Bluetooth and a remote control app. This can monitor and configure up to six ELX 200 speakers at the same time.

The DSP has presets and functions such as three-band EQ and limiter – users can store their favorite settings in five user presets. This can be controlled not only via the app, but also via the display on the speaker itself. The 1,200 Watt output power and up to 130 dB acoustic pressure levels currently common on paper are further elements that document the performance framework available here on the basis of the manufacturer's specifications.

EV ELX200-10P

The ELX200-10P is an active 10-inch high/mid top in a multi-functional enclosure to use on a tripod or as a floor monitor. It is also possible to suspend the speaker using three M10 flying points. As usual, all connections are on the rear of

the speaker. An LCD display shows all the key parameters of the DSP. The master volume control adjusts the overall volume, while the input level adjusts the volume of each individual input. Two combo jacks (TRS/jack), one RCA stereo input and one XLR-Link output with a mix signal from both inputs (pre-DSP, pre-Master Volume) are available as input. This means that the mixing deck can sometimes be left at home. An on/off switch and power connector complete the picture. The built-in DSP opens when you press the master volume control. This can then be used to select parameters.

As mentioned above, EV specifies the maximum sound pressure level (measured at 1 meter and maximum output with pink noise) at 130 dB SPL. The frequency response at -3 dB should range from 59 Hz to 18 kHz and at -10 dB from 53 Hz to 20 kHz.

The dispersion angle is 90 x 60 degrees and the rated output of the integrated Class D power amplifier is 1,200 watts. The low frequency driver is an EVS10M, while the high frequency driver uses a DH1C titanium compression driver (1

inch). Cut-off takes place in the top unit at 1,800 Hz.

The housing is made from polypropylene, while powder-coated steel is used for the front grille. Weighing in at 13.5 kilograms, the top unit is very light.

EV ELX200-12SP

If you need a little more acoustic pressure at the low end of the frequency spectrum, the EV ELX200-12SP also has a 12-inch subwoofer (also available in an 18-inch version). A frequency response of 49 to 135 Hz is achieved at -3 dB and even 41 to 165 Hz with a deviation of -10 dB. The maximum acoustic pressure level is 129 dB. The remaining key data are the same as for the ELX200-10P, as here again a Class D power amplifier with a rated output power of 1,200 Watts and the same DSP are built-in. Two XLR/TRS combo jacks and two connected link outputs (XLR) provide signals to and from the subwoofer. Weighing just under 19.1 kilograms, the sub deserves it rightly to be defined as portable and matches the lightweight top unit.

The housing is made from 15 millimeter plywood, while the steel

The rear houses all the important connections and allows access to the DSP, which can be controlled using the display and main volume push encoder without having to refer to the manual – the rear side of the subwoofer looks similar but lacks the RCA connections and the two XLR-TRS inputs are paired with two XLR-Link outputs



grille to protect the components is again powder-coated.

DSP functions

If you access the DSP menu by pressing the push encoder, you can set and store a number of parameters. You can choose between Music, Live, Speech and Club. These presets make it quick and easy to configure the ELX200-10P.

Choose the type of installation under "Location": Tripod, Monitor, Wall or Suspended. "Sub" is relevant if you want to combine the top unit with a subwoofer, "Off" is the default setting without low end extension. The X-over frequency can be selected between 80, 100, 120 and 150 Hz. If you use a sub from EV, presets are available for six different subwoofer models. Three EQ bands (Low, Mid, High) are available with a reduction of up to -12 decibels and an increase of up to +6 decibels: High includes a high shelf filter at 6 kHz, Mid has Bell characteristics at 1.8 kHz, while the bass range is set very low at 60 KHz. Other DSP settings relate to the operating LED on the front of the speaker (On/Off, Limit), the display,

The ELX200-10P top has beveled monitor edges so that it can also be used horizontally as a wedge

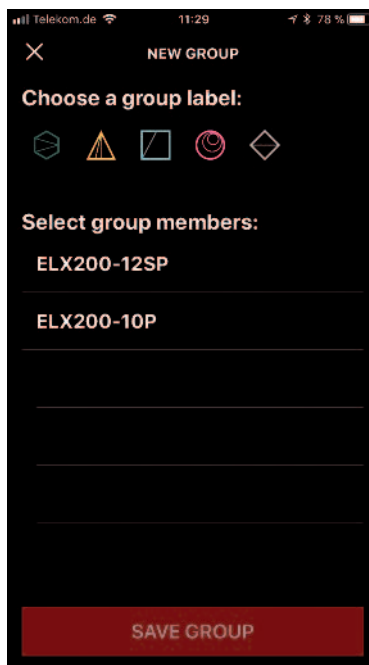


the menu lock for locking the DSP menu and the storage functions for saving user settings. If you would like to use the QuickSmart Mobile App for iOS or Android for remote control, you must first switch on Bluetooth under the "Control App" menu item. The DSP functions of the subwoofer are the same as

those of the top except that there is no 3-band EQ or "Location" presets.

Design variants

When using fully active speakers, there are many design variants, the most common of which are described in the manual. Whether a single ELX200-10P Top is now used as a small PA with a microphone and a music source, doing away with the need for a mixer, a small



If the QuickSmart app is opened on a smartphone or tablet while the Bluetooth function is active on the speakers, it automatically searches for ELX200 products in the immediate vicinity - the products found are then displayed; the next step is to create speaker groups and label them which greatly simplifies the operation

stereo system consisting of two top units is to be assembled or a large system for a band with subwoofer support, many options are available and there are some details to watch out for.

ELX200-10P set-up with sub ELX200-12SP

Using two ELX200-10P speakers as a stereo system with low end extension from two ELX200-12SP subwoofers is a quick and easy solution. Position the subs, screw in the speaker poles, attach the tops, connect one XLR cable from the mixing desk to the left sub, another to the right sub, then wire two short XLR cables from the link output of the subchannel used to the input of the top unit. On the subwoofers use the DSP menu to select the live preset and set the preset for the ELX200-10P as a low pass. On the tops you also choose the live preset, the location preset "Tripod" and pick the preset ELX200-12SP for the sub. Things are even more convenient with the QuickSmart mobile app, assuming Bluetooth is enabled on all four speakers.

It is worth mentioning that the speaker flange on the top part sits quite far back and not is centered, as often observed in other products. As a result, when speaker pole is used, the front grilles of the top and the subwoofer are in line. This not only looks better, but also leads to improved runtime behavior of the speakers that are vertically aligned on one level.

Mono-PA without mixing desk

You don't always need a subwoofer or stereo operation. For presentations, for example, it is often enough to place an active top unit on a tripod and to connect a microphone and/or music source directly to the active box. This also works quickly and effectively with the ELX200-10P. I just would have preferred if the EQ frequencies were chosen slightly differently for the microphone operation. The 60 Hz for the bass range is very low, 100 Hz would be more helpful here. The 6 kHz for the highs is also not

perfect for microphone applications, as hissing sounds might possibly also amplified when the volume is turned up, instead of giving the signal some more clarity and space. The EQ frequencies work pretty well for music playback, on the other hand. It would be really flexible if the EQ frequencies could be adjusted by the user – for example in the app.

Stereo system without a mixing desk

The set-up for a stereo system without a mixing desk is not ideal. For example, if you want to use your laptop as the music source at your next party, then (if a DI box is not used, like the Radial USB Pro tested in this issue, the Editor) the only option is to separately wire the right and left RCA input of the two tops. It is not possible to connect the laptop to only one speaker and then use an XLR cable to attach a second speaker for a stereo signal via the Link output. A system wired in this way would remain a mono system with two speakers. This is due to the fact that the link output signal of the ELX200-10P is pre-DSP and the RCA inputs are permanently wired to channel 1, i.e. are monophonic. It would have been better to have a mix output post-DSP, whose signal can then be freely determined by DSP. This would enable the mixing functions of one top to be used, while still allowing the second top to be used in stereo operation.

Mono-sub

The guide does not describe the possibility of operating two ELX200-10Ps with a mono subwoofer such as the ELX200-12SP. All you have to do for this is to connect the two mixer desk outputs to the subwoofer. Each of the Link outputs are then connected to one of the ELX200-10P tops.

Tops as floor monitors

If you want to use the tops as floor monitors then the speaker is to be placed on slanted side of the housing. The vertical dispersion angle is

90 degrees, while the horizontal is 60 degrees. On the DSP it is now necessary to select the "Monitor" menu item under "Location". The Link output is used to link multiple monitors on an Aux line.

Control

If you have a digital desk with a separate mono bus, for example a desk from Behringer's X32 series, you can enjoy the luxury of controlling the subwoofers and the tops separately. To do this, connect the two main outs of the desk with the two ELX200-10P tops, while the two subs are connected to the mono bus. Lower frequencies tend to be mono anyway, so they are detected by the ear without clear spatial locating. The advantage of such a wiring scheme is that only the instruments that actually produce low frequencies reach the subwoofer. The rest is all reserved for the tops. The sound seems significantly cleaner – the bass component can be defined for each channel line without the need of using the EQ.

Quick & smart

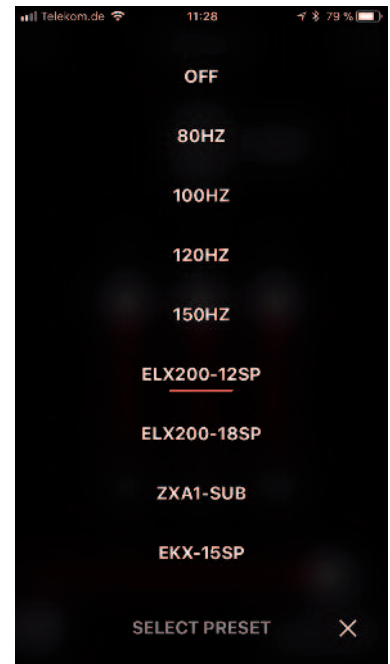
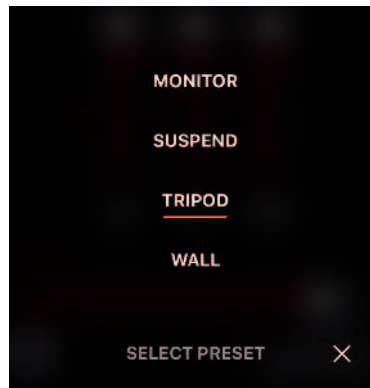
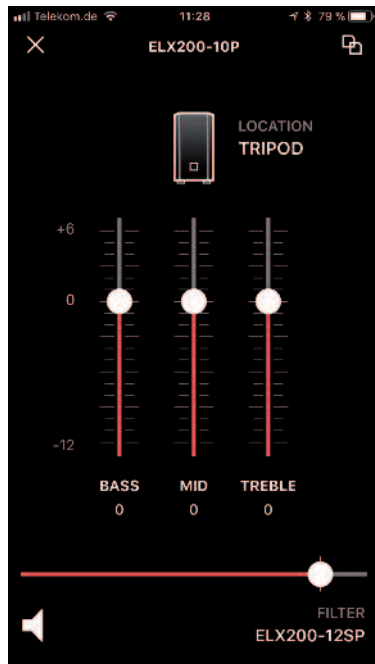
After downloading from the App Store and starting the app, the app automatically searches for all available speakers. This requires that Bluetooth is activated on the speakers. The speakers were quickly detected during the test and can now be configured individually or as a group. The user can create multiple groups which the user can toggle between. This is useful, for example, if you want to manage monitors and FoH speakers from the app. The app has access to the most important DSP functions, such as presets, filters, volume and EQ. The app is particularly easy and convenient to use, so in principle there is no need to go front of house or on stage to make changes during the event.

Sound

The test set-up, consisting of a subwoofer and a top unit, can be installed quickly. The settings were quickly completed by means of a

Facts

Manufacturer: Electro-Voice
Model: ELX200-10P Powered mid-high speaker cabinet
Frequency response (-3 dB): 59 Hz - 18 kHz
Frequency range (-10 dB): 53 Hz - 20 kHz
Maximum sound pressure level: 130 dB
Dispersion angle (HxV): 90° x 60°
Rated output: 1,200 W
Low frequency driver: EVS-10M 254 mm
High frequency driver: DH-1C 1-inch titanium compression driver
Crossover frequency: 1,800 Hz
Connections: 1 x Stereo-RCA, 2 x combo jacks (XLR/TRS) and XLR Mix
Enclosure material: Polypropylene, steel (front grille)
Suspension points: 3 x M10
Dimensions: 390 x 594 x 394 mm
Weight: 13.5 kg
Model: ELX200-12SP Powered subwoofer
Frequency response (-3 dB): 49 Hz - 135 Hz
Frequency range (-10 dB): 41 Hz - 165 Hz
Maximum sound pressure level: 129 dB
Rated output: 1,200 W
Low frequency driver: EVS-12M 300 mm
Crossover frequency: selectable between 80, 100, 120, 150 Hz
Connections: 2 x combo jacks (XLR/TRS) and 2 x XLR Link
Enclosure material: 15 mm plywood with EV coating, steel (front grille)
Suspension points: 3 x M10
Dimensions: 434 x 504 x 490 mm
Weight: 19.1 kg



The app provides access to all the functions of the DSP and allows the entire system to be configured quickly - for example, individual speakers can be muted, the volume can be adjusted and presets can be changed - they even thought of a master volume control

Quick-Smart app and the usual test songs were played.

The sound is good for the price class with no significant accentuations or weaknesses (see the frequency response). When the two ELX200-10Ps are combined with the subwoofer this seems a bit too tame for me. Increasing the signal of between 3 and 6 decibels creates more boost. You get even more punchy bass if you operate the subwoofer on a separate mono bus on the mixer desk. By this, it is not only possible to clean up the frequency spectrum, but also equalize the channels separately. Greater sound control is only possible with an external system controller, although the intended target group must certainly be kept in mind. Regarding possible sound pressure levels:

The PA offers amazing performance reserves with a moderate weight. This is the result of advanced DSP control and Class D power amplifier technology. Anyone looking for a band-PA will probably finding the right system in terms of sound and output power in a direct comparison.

Be more inclined to choose the combination of 12-inch and 18-inch subwoofer - everyone else will be happy with the system presented here. Of course the word "happy" is extremely subjective. At present the market seems flooded with active systems (see the market survey in this issue and in tools 5/2017): an optimum starting point for finding the right system in terms of sound and output power in a direct comparison.

Finale

Fully self-powered PAs offer many different configuration options, but are more complex to handle if each speaker has its own DSP and nu-

merous functions. Electro-Voice has a smart solution in the form of the QuickSmart app, which allows even larger speaker groups to be operated via the smartphone or tablet. This is a convenient option and will be welcomed by all users, who are not system techs. The lightweight and compact test PA is well suited for smaller bands in the entertainment sector. If the venue size requires more sound pressure, you would pick the sound systems with a bigger punch in the bass range. For this clientele EV offers the larger system variants in the form of the ELX200-15P and ELX200-18SP, which will make rock musicians happy too. ■

FEEDBACK

Jürgen Langhorst, Sales Director Germany for Electro-Voice:

"We are very happy with the positive test results. Although we consciously sent the smallest system from the new ELX family with the 10-inch top unit and 12-inch subwoofer for the acid test, the reviewer was obviously convinced by its sound pressure and power. This is really great to hear! However, if you prefer things a little louder, you should consider the more powerful systems of our new active PA family. The fact that our QuickSmart app has been so well received tells us that we are on the right track with our Plug & Play concept."

Pros and Cons

- + Connection variants
- + Class-D technology with sufficient headroom
- + DSP with user presets
- + Lightweight
- + Convenient QuickSmart app
- EQ frequencies cannot be changed in the DSP