Professional Powered Speakers

EUROLIVE B412DSP



EUROLIVE Digital Processor-Controlled 600-Watt 12" PA Speaker System with Integrated Mixer

- High-power 600-Watt 2-way PA sound reinforcement speaker system with integrated mixer for live and playback applications
- Industry's first intelligent 24-bit digital signal processor for ultimate system control:
  - Digital crossover, phase and time correction for perfect driver alignment plus dual compressor/ limiter for total system protection
  - Digital noise gate, low-cut filter, 2-band EQ, dynamic Contour filter for ultimate sound reproduction
- 2 ULN Mic/Line inputs with individual volume controls and peak LEDs
- Extremely powerful 12" long-excursion driver provides incredibly deep bass and acoustic power
- State-of-the-art 1.75" titanium-diaphragm compression driver for exceptional high-frequency reproduction
- Ultra-wide dispersion and large format exponential/conical horn with multi-cell aperture throat
- Additional Line output enables linking of additional speaker systems
- Versatile trapezoidal enclosure design allows different positioning:
- Stand mounting with 1 3/8" / 35-mm pole socket

Is there a little tiny sound technician inside? Almost.

If this were just a "dumb" powered loudspeaker, it would be one of the best you've ever heard. But we added smart digital processing that constantly adjusts the B412DSP's sound as the music changes.

It doesn't matter whether you need a PA system for a heavy metal band, a church or a one-man show, you need a speaker that sounds as great at a whisper as it does when run full-out. The B412DSP is designed to handle a wide range of applications, with power to spare and the kind of fidelity typically only available from state-of-the-art studio monitors.

Digital processing is the audible B412DSP difference.

Lots of companies make "powered" speaker systems by simply strapping amps on the back of a conventional two-way speaker. They sound better than passive speakers. But they're not taking advantage of 2008 digital technology. Until now, the few active systems that did use an internal digital "brain" for creating optimized sound were prohibitively expensive. Now the EUROLIVE B412DSP offers an intelligent solution at a price point that is unheard of in its class. The technology used in its design represents a major advancement in loudspeaker manufacture and performance. How so?

First, digital eliminates the variables that result from conventional analog electronics: parts tolerances, changes in performance as the parts age, hard-to-solve audio problems such as phase linearity and crossover slopes. These variables literally make it impossible to consistently produce identical performance in every speaker — or the same speaker over its lifespan.

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EUROLIVE B412DSP

- Tilts on its side for use as a floor monitor
- Ergonomically shaped handles for easy carrying and setup
- High-quality components and exceptionally rugged construction ensure long life
- Conceived and designed by BEHRINGER Germany

Second, digital vastly expands the signal processing capabilities that would require racks and racks of external analog equipment to achieve with a "dumb" active speaker.

A pristine 24-bit/48kHz digital signal path

From the instant the analog signal enters the B412DSP, the 24-bit digital processor takes over, ensuring the highest possible signal integrity — and we're talking CLEAN. First, this internal computer does chores like assigning frequencies to the low and high frequency amplifiers far more elegantly and with less distortion than old analog crossovers ever could. Then it compensates for the inevitable non-linearities in transducer frequency response.

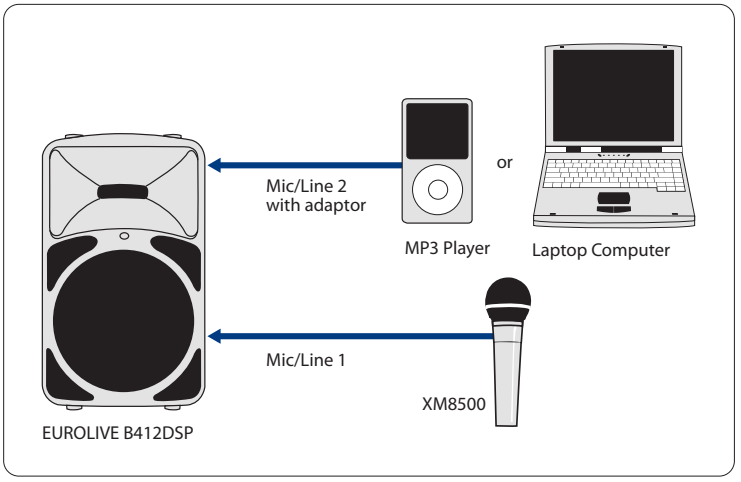
But much more than just selective EQ enhancement, the engine in the B412DSP analyzes the signal and intelligently applies specific filters to actually improve the sound quality depending on the bass content of the music and how loud you have it turned up. It's like having a tiny sound guy inside each enclosure (with all the best gear), monitoring the input and output signals, dialing in the perfect EQ and constantly making subtle adjustments to the crossover, compressor/limiter and more.

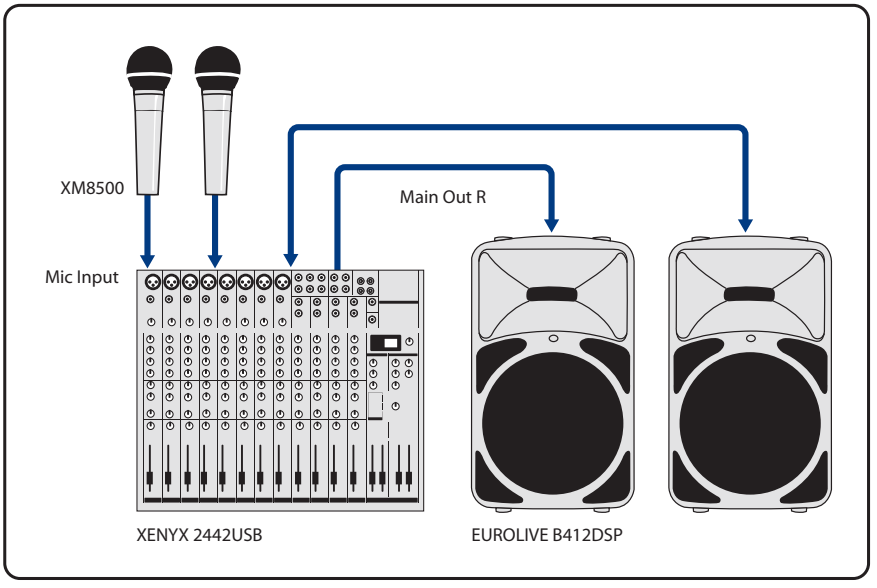
This powerful 24-bit DSP circuitry takes all the guesswork out of running the system so you can concentrate on your performance. All these intelligent processes work together proactively behind-the-scenes, making the B412DSP the best-sounding 12" loudspeaker system on the market.

Slam the gate on noise.

The B412DSP is ultra-quiet. But that can't be said of all of the sound sources you connect to it either directly or through

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EUROLIVE B412DSP

a mixer. Add a noisy computer sound output, a couple of microphones, a guitar with six stompboxes chained to it and your aunt's antique cassette player and you going to hear…HISSSSSSSSssssssssss.

Once again, the remarkable digital processing inside the B412DSP comes to the rescue. Turn up its Noise Gate and hear background hiss disappear! The internal computer is analyzing the sound and selectively cutting out the hiss without compromising the music!

Instant PA system

With just a single B412DSP loudspeaker system and one or two dynamic microphones, you can set up an instant sound system. Connect microphones directly to the B412DSP via the built-in mixer section. Put the B412DSP on a table-top or speaker stand, and power up. It's just that easy. And if you need more coverage, you can chain together as many as you like via the convenient Line Out XLR connector.

Now when you need a small PA, you can plug a microphone into the B412DSP right out-of-the-box and start the show. The rear panel of this speaker features inputs and level controls for two microphones or line-level sources such as MP3 players, audio from a DVD deck or a laptop computer.

There are also bass and treble master tone controls and an adjustable Low Cut filter to help eliminate annoying breath pops and mic handling noise. An additional filter, which we call Contour, allows you to select Speech (for enhanced voice intelligibility), or Music for the broader frequency range required for high-fidelity reproduction of music.

Put this all together and you have a mixer. Only you get it free built into the back of the B412DSP.

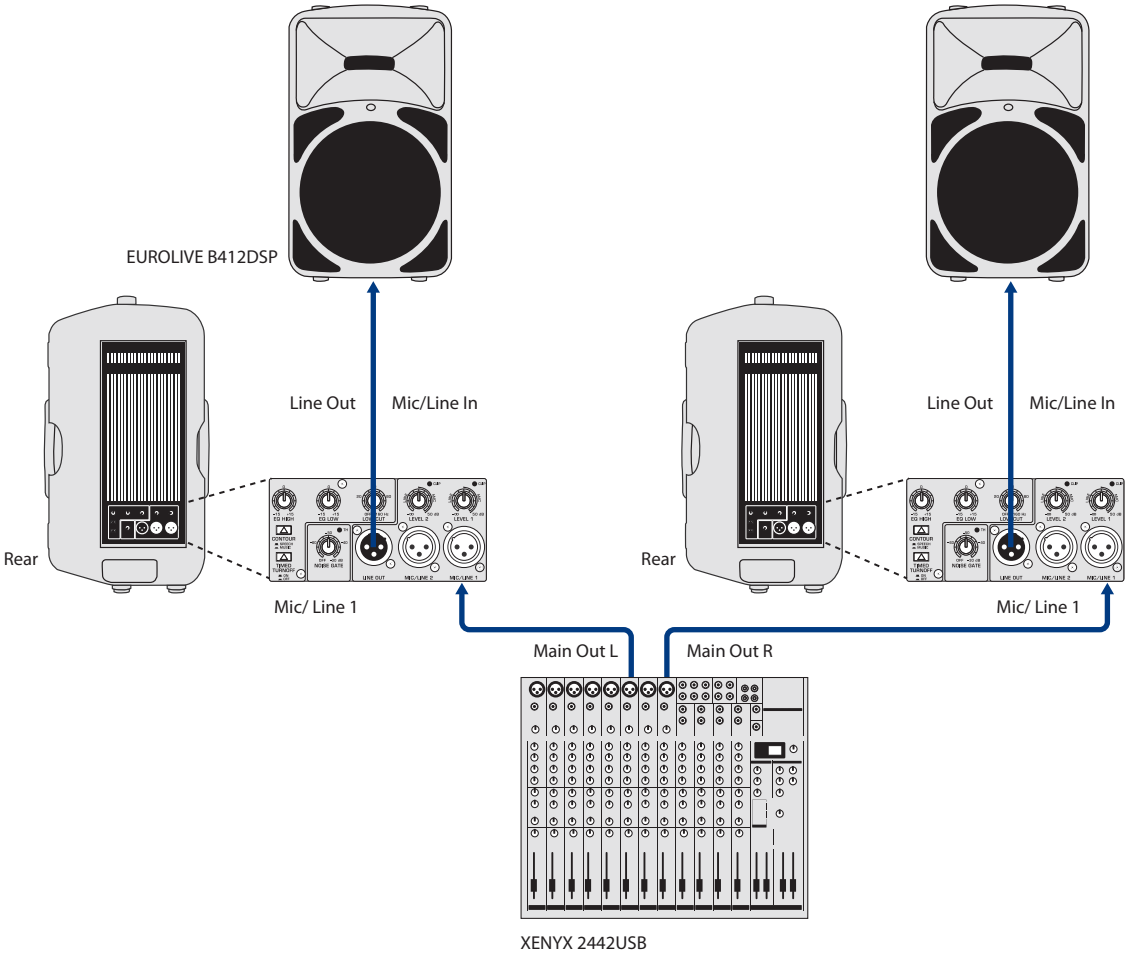
Custom-designed transducers

Let's face it; the transducer (speaker) is the only part of a sound system you actually hear, so we don't cut any corners. While some of our competitors are content to settle for third-party, off-the-shelf, one-size-fits-all speakers, we build our own transducers from scratch.

Not only do we wind our own voice coils, we process the paper pulp into cones and even machine metal components. We assemble them, magnetize them and test them multiple times.

This enables us to control the quality, and frankly, make better speakers that our competition can afford to put into comparably-priced "dumb" speakers. For example, both the 12" long-excursion LF transducer and state-of-the-art 1.75" titanium driver with Kapton voice coil we deploy in every B412DSP was specially designed and built just for this particular speaker model. There are no compromises because we did everything ourselves.

Connecting additional B412DSPs



EUROLIVE B412DSP

Power to spare

Cutting-edge technology and high-fidelity transducers are not all it takes to get your message across — you need power, and lots of it. At the heart of the B412DSP are two state-of-the-art amplifiers totalling 600 watts of output. They're capable of driving the speakers to shock volumes without the slightest hint of distortion. When it comes to pure output power, the EUROLIVE B412DSP will simply blow you away with its massive punch, smooth mids and articulate top-end — even at 3AM when somebody can't resist cranking the system up "all the way".

Marvelous monitoring

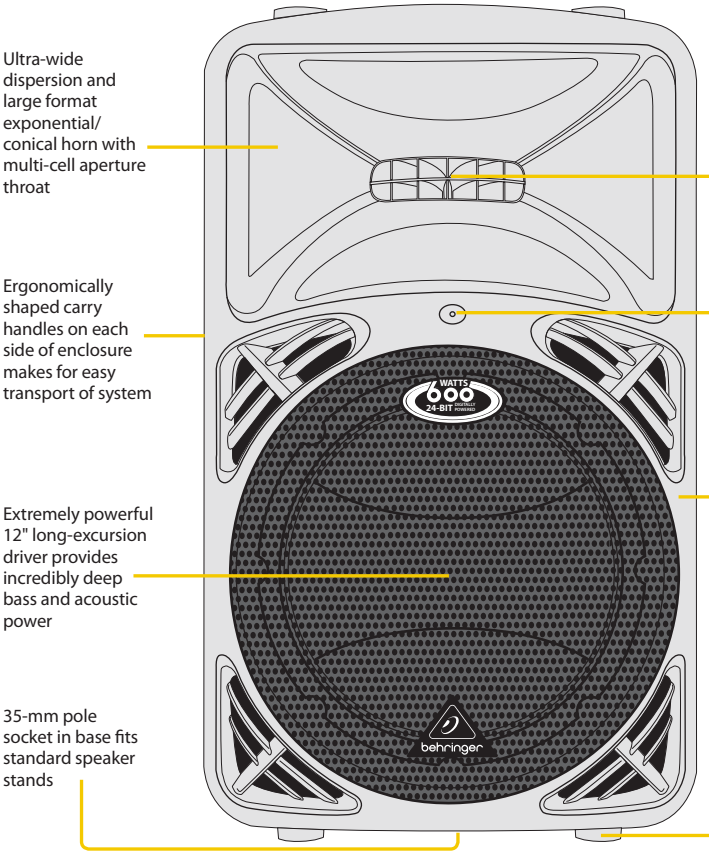
When laid on its side, the B412DSP tilts to the ideal angle for onstage monitor wedge applications. With its onboard amplifiers and dual-band EQ, the B412DSP merges high-fidelity performance with portability. Hookup is simple, requiring only a single mic cable from the monitor send on the mixing console and, of course, power. Additional monitors can be chained together via the XLR Line Out jack on B412DSP's rear panel.

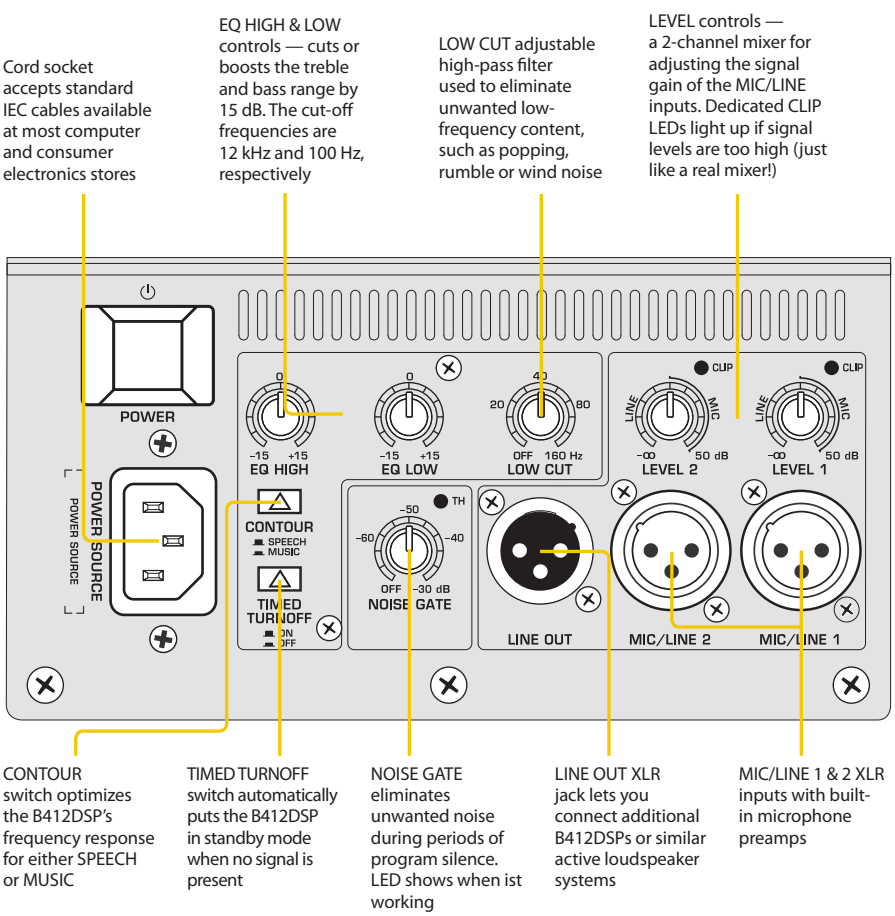
More than just a PA loudspeaker...

The B412DSP also makes an excellent onstage monitor for keyboards, acoustic guitars, or any line-level instrument* for that matter. You can plug your instrument into Mic/Line 1 and use the MIC/LINE 2 input to connect the monitor signal from the PA mixing console, so that you can also hear the other members of your band. This opens up lots of possibilities. If you want to use more than two instruments, you will need a submixer (e.g. MicroMIX MX400) to mix down the signals and route them to the B412DSP.

* You will need a special adapter to convert a standard ¼" TS cable to XLR, or a direct injection box like our ULTRA-DI DI100.







EUROLIVE B412DSP

AUDIO INPUTS	
MIC/LINE (2)	XLR (balanced)
Input impedance	27 kOhm
Sensitivity	-40 to +10 dBu

AUDIO OUTPUTS	
LINE OUT	XLR (balanced)
Output impedance	120 Ohm

PROCESSING	
DSP	24-bit fixed-point Motorola
AD/DA converter	24-bit / 48 kHz
Limiter	dual protection for woofer and HF driver
Dynamic EQ	dual parametric EQ's
NOISE GATE	variable (off to -30 dB < -45 dBr)
TIMED TURNOFF	switchable (3 min)
CONTOUR	switchable speech / music contour
EQ HIGH	± 15 dB (12 kHz)
EQ LOW	± 15 dB (100 Hz)
LOW CUT	40 - 160 Hz (24 dB/Oct.)

SYSTEM DATA	
Frequency range	45 Hz to 20 kHz
Crossover	Butterworth, 1.7 kHz, 24 dB/Oct.
Max. SPL	127 dB @ 1 m
Dispersion angle	90° x 45°

OUTPUT POWER	
LOW-FREQUENCY RANGE	
RMS @ 1% THD	320 W @ 8 Ohm
Peak Power	460 W @ 8 Ohm
HIGH-FREQUENCY RANGE	
RMS @ 1% THD	80 W @ 8 Ohm
Peak Power	140 W @ 8 Ohm

POWER SUPPLY	
Mains Voltage/Fuse	
100 V~, 50/60 Hz	T 6,3 A H 250 V
120 V~, 60 Hz	T 6,3 A H 250 V
220 V~, 50 Hz	T 4,0 A H 250 V
230 V~, 50 Hz	T 4,0 A H 250 V
Power consumption	max. 650 W
Mains connector	Standard IEC receptacle

DIMENSIONS/WEIGHT	
Dimensions (H x W x D)	26 x 15 ½ x 15" 660 x 395 x 380 mm
Weight approx. 30 kg	approx. 65 lbs

BEHRINGER is constantly striving to maintain the highest professional standards. As a result of these efforts, modifications may be made from time to time to existing products without prior notice. Specifications and appearance may differ from those listed or illustrated.

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