

## LD SYSTEMS ICOA® PRO 15 A & SUB 21 A

BY STEVEN HONEYBALL

[WWW.STEVENHONEYBALL.CO.UK](http://WWW.STEVENHONEYBALL.CO.UK)



**ICOA PRO 15A £1206**  
**ICOA PRO SUB 21A £2155**  
**SYSTEM INCLUDING:**  
**2X 15 A TOPS, 2X 21 A SUBS, COVERS**  
**AND WHEEL BOARDS £7502**

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In the dynamic world of live sound, audio professionals and DJs are constantly seeking equipment that combines raw power with intelligent design and intuitive control. The demand for versatile, high-performance PA systems that can adapt to a myriad of applications. The new LD Systems ICOA PRO series comprising the ICOA PRO 12A and 15A powered coaxial loudspeakers, complemented by the huge ICOA PRO SUB 21A subwoofer, promises to redefine expectations for portable sound reinforcement.

I headed over to Niclen HQ to meet the Adam Hall team and load the review system onto the van – a necessity for this setup, it simply won't all fit in a car. I was the first in the UK to get my hands on the brand new PRO 15A system that had been delivered the morning of collection (not even the UK team had opened the boxes) along with the PRO SUB 21A, which is what this review is on. While I may mention the 12A, it's only where the 12A and 15A share features or there is a comparison to be made.

At the heart of the ICOA PRO series are the 12A and 15A powered coaxial PA loudspeakers. LD Systems has meticulously engineered these units to deliver exceptional clarity and dispersion, packing a punch well beyond their physical footprint.

The most striking design choice is the coaxial arrangement of the drivers. This configuration, where the high-frequency driver is positioned within the acoustic centre of the low-frequency driver, offers several distinct advantages. Foremost among these is superior phase coherence across the frequency spectrum, leading to a more accurate and natural sound reproduction, particularly off-axis. This results in a wider, more consistent listening area, a critical factor for audiences spread across a venue.

The ICOA PRO loudspeakers are housed in a durable ABS enclosure, designed to withstand the rigours of constant moving around. For ease of handling, each cabinet is equipped with four integrated handles, strategically placed for comfortable lifting and carrying.

Mounting versatility is a cornerstone of the ICOA PRO tops. They feature a dual-tilt flange with 0° and 5° angles, allowing for precise aiming when pole-mounted on a stand or subwoofer. For more permanent or suspended installations, six M10 fly points are integrated, providing secure attachment for eyebolts.

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LD Systems also offers optional accessories like universal mounting brackets and the EasyMount® bracket, further expanding installation possibilities. The ICOA PRO tops boast serious audio horsepower. Both the 12A and 15A models employ highly efficient Class D amplification, delivering immense power. The 12A offers 2000W Peak (1000W RMS), while its larger sibling, the 15A, escalates this to a commanding 3000W Peak (1500W RMS). This ample power ensures significant headroom, allowing the loudspeakers to reproduce dynamic peaks without strain or distortion.

The transducers are custom-made Celestion units; the 12A features a 12" subwoofer and a 1.75" high-frequency driver, while the 15A steps up to a 15" subwoofer, maintaining the 1.75" high-frequency driver.

Both cabinets utilise ferrite magnets and share a 3" voice coil for the woofer and a 3" voice coil for the tweeter. The crossover frequency for both models is set at 80 Hz.

Frequency response is impressive, with the 12A ranging from 53 Hz to 20 kHz (-10dB) and the 15A extending slightly lower to 50 Hz – 20 kHz (-10dB), ensuring comprehensive full-range sound reproduction. Maximum SPL figures are equally noteworthy: the 12A achieves a peak SPL of 127 dB (Sine Burst) and an average of 118 dB (Sine Burst), while the 15A pushes this further to 130 dB Peak (Sine Burst) and 120 dB Average (Sine Burst). For pink noise, the 12A hits 133 dB Peak and the 15A reaches 135 dB Peak, demonstrating their capability for sustained high-output performance.

*Sine Burst indicates the absolute loudest, momentary sound pressure level the speaker can produce when fed with a very pure, single-frequency signal for a short duration, before any limiting or distortion becomes significant.*

*Pink noise, on the other hand, is designed to sound more "balanced" to the human ear. It has equal energy per octave. An octave represents a doubling of frequency (e.g., 100 Hz to 200 Hz is one octave, and 5000 Hz to 10000 Hz is also one octave). This means that for every doubling of frequency, the power (or intensity) of pink noise decreases by three decibels (dB). On a frequency spectrum graph, pink noise appears as a downward slope.*

The integrated SysCore® DSP (Digital Signal Processor) is the brain behind the system's refined sound. With 24-bit AD/DA converters operating at a 48kHz sampling frequency and an excellent

signal-to-noise ratio of 108 dB, the DSP provides precise control over various audio parameters, ensuring optimal sound quality and protection. Protective circuits include DC protection, short circuit, multiband limiter, and overheat protection, safeguarding your investment and ensuring reliable operation. The passive cooling design with cooling fins further enhances reliability by dissipating heat efficiently without the need for noisy fans.

The ICOA PRO loudspeakers offer a versatile array of connectivity options directly on the unit. An integrated digital 4-channel mixer provides immediate control over inputs. There are two balanced XLR/6.35mm jack combo sockets for Mic or Line connections, accommodating a wide range of sources. A balanced 3-pin XLR MIX OUT socket outputs the pre-fade main mix, crucial for feeding signal to external devices, particularly subwoofers. ▶



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On-device navigation is managed by a single Rotary-Push Encoder and a clear liquid crystal display. The encoder allows you to scroll through menu items, adjust parameters like channel volume and EQ, and access the settings section with a simple push-and-hold action. The standby/in use display provides an overview of channel levels, clipping indicators, limiter activity, and various menu settings, making adjustments straightforward. The front LED can be configured to indicate limiter activity, simply show that the unit is on, or remain off, providing useful visual feedback.

The ICOA app is available for both Apple App Store and Google Play Store, and unlocks the full potential of the ICOA PRO system. It provides a comprehensive graphical interface for managing every aspect of the loudspeakers.

Users can perform firmware updates, control input and output channels, adjust fader levels (from -80 dB to +10 dB) and mute channels. The app also offers granular control over the powerful equaliser, allowing users to fine-tune frequency bands (Low, L-Mid, H-Mid, High) with adjustments for gain, frequency, and quality (including low-shelf and high-shelf options). This level of control, normally found on dedicated mixers, brings unprecedented flexibility to a portable PA system. Beyond EQ, the app allows customisation of the front LED function, LCD display dimming and brightness, and signal delay (from 0.0ms to 147ms), enabling precise time alignment in complex setups. Users can also reset the device to factory settings and view system information (product type, firmware, DSP version).

The ICOA PRO range also features True Wireless Stereo (TWS). This Bluetooth-based technology is a game-changer for stereo setups, eliminating the need for long XLR cables between the main and follower loudspeakers. TWS allows two ICOA PRO units of the same size (12" or 15") to wirelessly link. The app clearly designates one unit as Main (M) and the other as Follower (F), streamlining the pairing process. While in TWS mode, Bluetooth audio playback is managed solely through the Main unit, ensuring a stable connection.

The app provides intuitive controls to swap Left/Right channels, toggle between mono and stereo configurations, and activate "Main Coupling", which is a particularly useful feature that synchronises settings across both main channels, simplifying adjustments for a unified stereo experience. Saving and recalling "Scenes" within the app further enhances workflow, allowing users to instantly switch between optimised configurations for different venues or events, which is great if you work in the same venues on a regular basis.

The ICOA PRO tops come with several onboard speaker presets (Full Range, Flat, Monitor, Satellite) that can be loaded either via the device's encoder or through the app. The "Monitor" preset is especially notable as it enables a low-latency mode, critical for on-stage monitoring applications. Furthermore, the physical design supports horizontal use, and the horn can be rotated 90° using a T20 Torx screwdriver, allowing for optimal dispersion patterns in floor monitor or side fill scenarios. These aren't small boxes – the PRO 15A weighs in at a hefty 25.8kg (56.9lb) with a size to match the weight at 417mm x 691mm x 415mm (16.81" x 27.2" x 16.3") WxHxD.



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In standalone operation, the PRO 15A delivered impressive sonic performance. The coaxial design truly shines, providing a remarkably coherent and focused soundstage, even when moving across the dancefloor.

Vocals are articulate and the overall sound is transparent and balanced. The power on tap ensures plenty of headroom, allowing for clean, undistorted sound at high volumes. Versus the 12A, the 15A, as expected, offers a deeper low-end extension and slightly more overall output, making it suitable for larger spaces or applications requiring more robust bass without a dedicated subwoofer. No high-performance PA system is complete without a solid foundation in the low frequencies, and the LD Systems

ICOA PRO SUB 21A subwoofer rises to the occasion with an authoritative presence. Designed to seamlessly integrate with the ICOA PRO tops, this subwoofer ensures that every beat and bassline is felt as much as it is heard.

Unlike the ABS-housed tops, the SUB 21A features a robust multiplex birch plywood housing, a premium material known for its excellent acoustic properties and superior durability, especially for bass enclosures. This construction helps minimise unwanted resonances, ensuring a tighter, more defined low-end response. Weighing in at 57kg (125.66lb), it's a substantial unit at 566mm x 700mm x 699mm (22.28" x 27.56" x 27.52"), but LD Systems has equipped it with eight sturdy handles – four on each side.

For enhanced mobility, an optional castor board can be attached, transforming the subwoofer into a rolling unit which made it manageable for me to get in and out of the van by myself although I'd suggest a ramp for ease of loading. The SUB 21A also features two M20 flanges, one on the top and one on the left-hand side, providing versatile options for mounting speaker poles to elevate the ICOA PRO tops.

The ICOA PRO SUB 21A is a true powerhouse, driven by a Class D amplifier that delivers a staggering 3000W Peak power (1500W RMS). This immense power reserve allows the subwoofer to reproduce deep, impactful bass with exceptional clarity and punch, even at extreme volumes.

The heart of its low-frequency prowess is a custom-made 21" woofer. This massive driver features a robust 4.5" voice coil and a Neodymium magnet, known for its high efficiency and powerful magnetic field. This combination ensures precise cone control and high output capabilities.

The subwoofer's frequency response spans from a subterranean 29 Hz up to 120 Hz (-10dB, relative to average), ensuring that even the deepest bass notes are rendered with full impact. The maximum SPL figures are truly impressive: 133 dB Peak (Sine Burst) and 129 dB Average (Sine Burst), pushing to an astonishing 136 dB Peak (pink noise).

Like the tops, the SUB 21A benefits from the SysCore® DSP, which provides 24-bit AD/DA conversion at 48 kHz sampling frequency and a 108 dB SNR.





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This sophisticated processing ensures precise control over the subwoofer's output, optimising its performance and integrating it seamlessly into a larger PA system. Comprehensive protective circuits (DC protection, short circuit, multiband limiter, overheat) are also on board, offering vital protection and extending the lifespan of the unit. The passive cooling system further underscores its robust and reliable design.

The ICOA PRO SUB 21A offers straightforward connectivity. It features two balanced XLR line inputs and two balanced XLR line outputs. The outputs allow for easy daisy-chaining. Critically, the ICOA PRO tops can feed into the subwoofer's inputs via their MIX OUT, simplifying signal routing in a full system.

While on-device controls are available via the built-in display and encoder, much of the advanced management of the subwoofer is handled through the ICOA PRO app. Within the app's dedicated Subwoofer Section, users can adjust individual subwoofer channel volumes, mute outputs, and apply various subwoofer presets. These presets include high-cut filters at 80 Hz, 100 Hz, and 120 Hz, allowing precise integration with the tops.

One of the most powerful features for the SUB 21A is the "Cardioid" preset, which enables a cardioid subwoofer setup. This configuration significantly reduces unwanted low-frequency spill on stage, focusing the bass energy on the dancefloor. The app also offers "Monitor" presets designed for low-latency stage monitoring applications, further enhancing the subwoofer's versatility.

Like the tops, the app allows for LED function control, LCD dimming/brightness, and delay adjustments, ensuring full system coherence.

Operating the ICOA PRO SUB 21A in isolation reveals a subwoofer that is both powerful and remarkably articulate. The 21" custom-made driver delivers incredibly deep and resonant bass, yet it avoids boominess, maintaining a clear definition even at high volumes. The ability to switch between various high-cut frequencies is invaluable for tailoring the subwoofer's response to different full-range speakers or room acoustics. The cardioid functionality, while requiring multiple units, represents a professional-grade feature that significantly improves stage sound and overall FOH clarity.

When combined, the ICOA PRO tops and SUB 21A form an impressively powerful and balanced PA system with a full, rich sound that spans the entire audible spectrum. The deep, impactful bass from the 21" subwoofer provides a solid foundation, while the coaxial tops deliver clear, articulate mids and highs.

The 90° x 50° dispersion of the coaxial tops, combined with the controlled directivity possible with cardioid subwoofer setups, ensures excellent and consistent coverage across the dancefloor and venue minimising hot spots and dead zones, providing an enjoyable listening experience for everyone.

What truly sets this system apart is its seamless integration and the intuitive control offered by the ICOA PRO app. From granular EQ adjustments and precise delay settings to effortless TWS linking and powerful cardioid subwoofer capabilities, the app transforms complex system management into a streamlined process.

I truly enjoyed using this system throughout the school prom season (my back didn't though) and for DJs seeking a powerful, versatile and intelligently designed PA system that delivers decent sound quality and unparalleled ease of use, the LD Systems ICOA PRO series is worth chatting to your local retailer about and seeing if you can get a demo if you are looking to purchase or upgrade. ☐

