

ADS

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**L1290 loudspeaker system:
The digital challenge
and response.**



New performance values

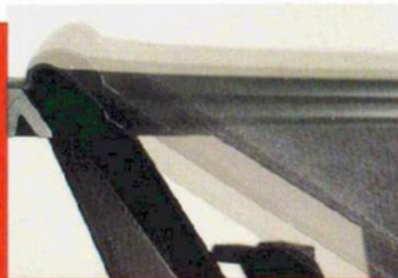
Digital recording and playback systems have radically changed the dimensions of performance for loudspeakers. Speakers which were once judged to be quite good with conventional analog sources may simply be unable to deliver the advantages that digital playback affords.

Everything ADS has learned as the premier maker of digital monitor loudspeakers is expressed in the L1290. The technology behind the Linear Drive class of ADS loudspeakers results from interactive participation in the development and perfection of digital recording techniques.

The L1290 technology easily handles the quantitative demands digital playback makes. Qualitatively, the L1290 articulates the opportunities digital presents.

The digital challenge and response

Wider dynamic range is the most immediately noticeable difference. A speaker must be able to handle higher playing levels without driver compression. And it must be linear across this wider range of levels. Further, because the phonograph cartridge (and the accompanying need for equalization) is eliminated, frequency response of the source is ruler flat. The speaker is now the only transducer in the audio chain—its strengths and weaknesses are all the more explicit. Background noise and acoustic feedback are eliminated; distortion levels are lowered by two orders of magnitude; and stereo separation is increased to 90dB. With this tremendous advance, loudspeakers must not only ably handle prodigious power, but also resolve fine shadings of timbre with an agile precision fully equal to a nearly perfect source. The L1290 stands ready.



The premium butyl rubber surround allows the woofer long, linear cone travel.

ADS StiffLite® Linear Drive woofers

ADS speakers have a respected tradition of producing deep bass response with high efficiency from remarkably small enclosures. The L1290, while not small, has deeper, more accurate bass and higher maximum output level than many larger speakers.

The L1290's dual 210mm/8.3 inch woofers provide nearly the cone area of a 12 inch driver, but in a much slimmer enclosure. Each woofer is housed in its own separate, sealed chamber for maximum performance, and the woofers have strong, cast aluminum baskets to hold the magnet structure and moving parts in perfect alignment.

The woofers use ADS' unique StiffLite cone material. These cones are rigid for true piston behavior, light for excellent transient response, and well-damped for low distortion and freedom from coloration. The woofers employ ADS' Linear Drive voice coil and magnet structure design for extended, linear voice coil travel. Butyl rubber suspensions provide long cone travel while maintaining full control of the cone at its excursion limits, thereby lowering distortion. The tandem Linear Drive design has an unparalleled ability to handle high levels of power while outlining the detail within a complex musical structure.



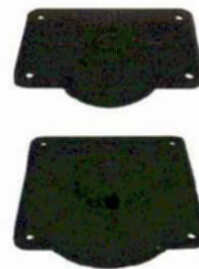
ADS woven soft-dome tweeter and midrange

At ADS all drivers are built from the voice coils up. This complete control over design and manufacturing results in drivers and speaker systems of unsurpassed quality and performance.

The L1290's 19mm/0.75 inch tweeter and 50mm/2 inch midrange are capable of high output levels with low distortion. Their strong, woven fabric domes are treated with a proprietary damping compound which seals the domes and contributes to the superb transient accuracy of these drivers. Their powerful magnet structures and precision voice coils work with the domes to deliver exceptional linearity and high efficiency for clarity, high resolution and wide dynamic range.

The choice of a dome midrange—instead of a conventional cone—is important; a dome offers smoother response and more uniform dispersion for better imaging.

An exact amount of magnetic cooling fluid is injected into the tweeter's magnetic gap to conduct heat away from the voice coil. This quick heat transfer preserves transient detail and maintains dynamic linearity at high playing levels.



ADS high accuracy crossover network

The ADS crossover network design accords smooth, flat frequency response throughout the listening area and uncannily precise stereo imaging. With digital processes comes a whole new level of spatial accuracy that crossovers of a less exacting design could not resolve. The L1290 network is an elegant, low-loss circuit design for high efficiency. ADS uses computer-grade, tight tolerance components securely soldered to a glass-epoxy circuit board. The crossover also makes provision for biamplified operation and includes a tweeter level switch to aid in room matching.





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The L1290 in the listening environment The L1290 has the unusual quality, quite rare among loudspeakers, of 'belonging' in the room. Its tower shape occupies very little floor space—less, in fact, than many bookshelf speakers. Its above-the-furniture height, moderate depth and small footprint make it extremely versatile in placement.

The cabinet of the L1290 is a logical extension of its driver technology. The tower positions the mid- and high-frequency drivers near seated ear level, above the upholstery, for best dispersion. Its flush front panel and flush driver mounting are acoustically correct for diffraction- and reflection-free high frequency radiation. The frameless, acoustically transparent metal grille preserves the integrity of the acoustic wavefronts while ably protecting the drivers.

The enclosure is fully finished on its five visible sides with fine, bookmatched, genuine walnut veneers or with a soft black urethane coating. The enclosure's fine finish and detailed craftsmanship make the L1290 a system that is as satisfyingly appropriate when silent as it is definitive when it speaks.

About ADS ADS, Analog & Digital Systems, is an expanding young high-technology American company with roots in European craftsmanship and design. At ADS, advanced technology is always at the service of musical enjoyment, and it is always firmly grounded in the sciences of physics, chemistry and acoustics.

ADS offers a carefully thought out line of loudspeakers and electronic components for the home, for professional applications and for automotive use. Atelier components express a particularly human approach to high fidelity; their modular design will grow with advancing technologies. Combining the design talents of ADS in the United States and its sister company, Braun Electronic in West Germany, ADS products have consistently received high critical acclaim and have won many coveted design and engineering awards.



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| Frequency response | 40–27,000 Hz, ± 3 dB. |
| Impedance | 8 Ohms, nominal. |
| Efficiency | 90 dB SPL from 2.8 VRMS ("1 Watt") pink noise input, measured at 1 meter in a typical listening room. |
| Driver complement | One 19mm/0.75" woven soft-dome tweeter with proprietary damping. Wet wound, single layer, high temperature voice coil assembly. Magnetic fluid cooling. One 50mm/2.0" woven soft-dome midrange with proprietary damping. Wet wound, single layer, high temperature, voice coil assembly. Two 210mm/8.3" cast basket, high compliance woofers with tapered, damped Stiffite® cones and butyl rubber surrounds. Wet wound, two layer, high temperature Linear Drive voice coil assemblies in extended-pole magnet structures. |
| Crossovers | 500 Hz and 5000 Hz. High efficiency, tight-tolerance, design with 12 dB/Octave slopes. |
| Provision for biamplified operation | Mode switch and separate terminals for direct woofer input. |
| Tweeter level control | Two-position switch, 0 and – 1.5 dB. |
| Driver protection | Tweeter—type 3AG 1.6 Amp fuse. Midrange—type 3AG 2.5 Amp fuse. |
| Power rating | 300 Watts maximum peak program. |
| Recommended amplifier power | 15 Watts minimum, 300 Watts maximum. |
| Input connectors | Two pairs of color-coded, multi-way binding post terminals. |
| Enclosure type | Acoustic suspension, with glass fiber damping and separate chamber for each woofer. |
| Enclosure construction | 19mm/0.75" thick, high density compressed wood with internal bracing. Diffraction-corrected flush front baffle and flush driver mounting. |
| Finishes | Select, straight-grain, genuine walnut veneer or textured black urethane. Enclosure fully finished on all 5 visible faces. |
| Grille | Acoustically transparent, frameless perforated steel with matte black finish. |
| Dimensions | 1063mm/41.9" H x 265mm/10.5" W x 300mm/11.9" D. Grille adds 25mm/1" to depth. |
| Shipping weight | 33 kg/73 lb. |
| Optional accessories | F12 Base. PA1 biamp/crossover module. Installs in recess in L1290 enclosure. |

For the technically minded A detailed 'technical perspective' on ADS speakers is available from your dealer or directly from ADS.