

# Dynaco Speakers



The magnificent and durable Dynaco A-25 loudspeakers.

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## Description:

More than 600,000 A-25s have been sold since its premiere. This Dynaco value leader clearly ranks as the most popular quality speaker of all time. First it was listened to with doubt of its pretentious claims, then with awe for its performance; later with admiration for its listening ease; and finally with respect by the host of copiers it engendered.

This acceptance prompted Dynaco to develop other models which represented refinements of sonic quality or application to meet a variety of needs and personal tastes. In contrast to some loudspeaker lines which apparently strive for a different sound from each model, the sonic characters of all Dynaco speakers are very closely related. All of our designs stress clarity, smoothness, precision, and above all, *value*.

Since the continuing design intent is literal translation of the original performance, or verbatim reproduction, the casual listener at first may perceive no differences between some models at moderate sound levels. Careful listening, which is most important when choosing any speaker system, will elicit the distinctions which brought about successive designs. Yet the original A-25 has not been found wanting in this comparison.

Every loudspeaker design represents some compromises, and it is in weighing the designer's choice against the listener's ear and wallet that success is determined. Dynaco has concentrated its attention on smoothness of response, delineation of detail, cohesiveness of image, sensible efficiency and reasonable power handling capability. The cost had to be low to assure the evident value from the outset, so that high sales volume would facilitate production efficiencies to continue this record. The A-25 was introduced when Dynaco felt that it had achieved a sonic balance which, in comparison with speakers two and three times its cost, fulfilled most listening requirements in a true bookshelf size at well under \$100.00.

How well we succeeded is indicated by Gordon Holt's statement in *Stereophile* magazine. "You will have a hard time buying more musical naturalness at any price... (the A-25s) are quite probably the best buy in high fidelity today." As Julian Hirsch commented in *Stereo Review*, "When the music contained low bass... the Dynaco (A-25) left no doubt of its capabilities... Nothing we tested had a better overall transient response." And *Audio* magazine echoed, "The A-25 produced the finest tone-burst response of any speaker tested in this manner, regardless of price."

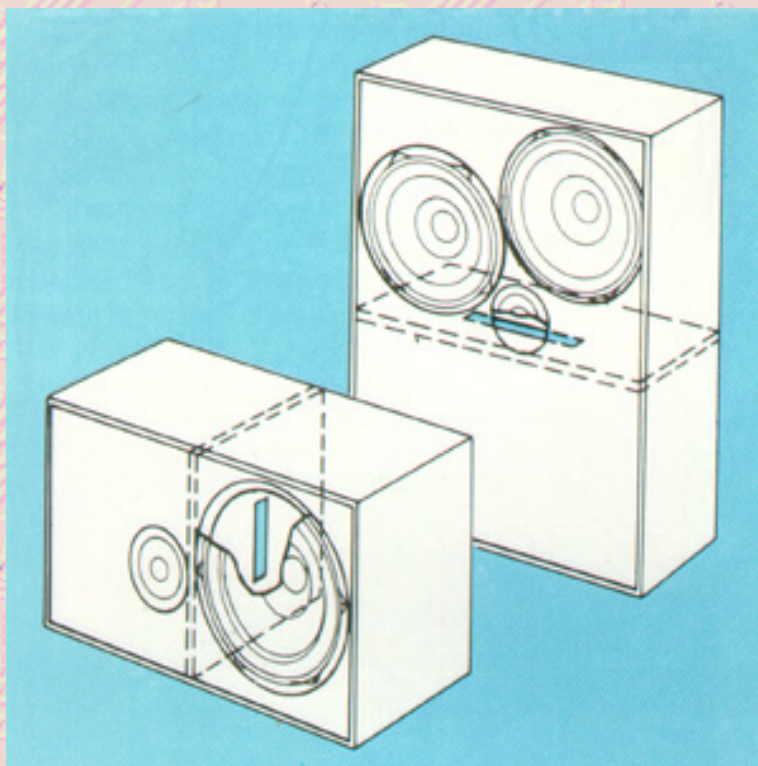
The various Dyna models are remarkably similar on close examination. That's only logical, in light of the original design's manifest success. There may be differences of detail in the drivers which may not be superficially apparent. Or, the crossover networks may differ (the crossover frequency is but one aspect). Even structural differences in the cabinets have a decisive bearing on sonic refinements. Since differences in speakers are not readily quantified, and are largely subjective, Dynaco has exerted its expertise where the results are most apparent.

All Dynaco speakers are two-way systems (the A-50 employs two identical woofers) to avoid the problems of complex crossovers, and to minimize the effects of different drivers reproducing the same frequencies. While the ideal reproducer would be a unified source, physical limitations preclude this in practical systems. Careful tailoring of Dynaco drivers for integral rolloff characteristics eliminates the need for elaborate networks, assures smooth mid-range transition, and minimizes time-delay and phase distortion.

A single high power wide-range tweeter provides sonic homogeneity and excellent dispersion with minimal interference effects. We use a non-rigid dome which is specially treated to reduce cavity resonance effects. Wherever possible, it is located near the center of the panel to minimize edge interference aberrations.

Extensive investigation has shown that a 10" woofer affords the optimum combination of low frequency generating capability, low moving mass, and adequate structural rigidity to avoid cone breakup for a smoother mid-range blending.





The aperiodic design principle.

The patented *aperiodic* (essentially non-resonant) woofer design utilizes a highly damped vent (not a reflex port) whose acoustic resistance is very carefully controlled. Its high friction venting action lowers the "Q" of the system and reduces the impedance variation near resonance in Dynaco speakers to 2:1, contrasted with 400% or greater variations in most systems. The advantages are smoother response with better bass definition and reduced Doppler distortion, plus more efficient amplifier power transfer (Dynaco speakers can sound louder than others of the same efficiency from a given amplifier), since the amplifier works into a more nearly resistive load. All Dynaco speakers have a nominal 8 ohm impedance (minimum 7 ohms) which permits parallel connection of pairs.

The A-25VW has an attractive walnut vinyl-covered cabinet, with a dark brown multi-hued grill cloth which offers an alternative to the conventional beige linen. In other respects, it is similar to the A-25, but is not available in all countries. All other Dynaco speakers are walnut veneer.



The less-well-known A-35 loudspeaker.

The A-35 is a sonic refinement of the A-25 in a slightly larger, more complex cabinet with a different crossover for a subtly smoother, wider range, and more articulate sound. Though on first listen some will believe that the A-25 has more bass, extended listening will reveal the authenticity of the A-35's tighter, better defined and extended low end. Perceptibly smoother mid-range transition yields a unified clear imaging that is the key to the A-35's resolution of detail. *Audio* magazine described the A-35 as "unobtrusive". It is a most appropriate accolade. Many consider it to be the most accurate Dynaco speaker.

The A-35 and A-50 use the same tweeter and similar woofers in an exclusive double compartment cabinet (also in the A-40XL) which places the woofer(s) in one section which is internally vented to the other half. Thus are combined the *aperiodic* advantages of variable volume action for critical damping at resonance, with the benefits of a larger sealed enclosure for minimum distortion at the lowest frequencies.





The burly A-50 loudspeaker.

The sonic balance of the A-50 tends to favor the middle low bass range, and emulates the sound quality of one of the most expensive and widely regarded compact speakers. The A-50's dual woofers provide 1/3 more radiating area than a 12" cone with superior transient response and exceptional power handling capability. The shallow cabinet depth affords a unique opportunity for a system of its capability to be installed in room dividers, or flush mounted in normal bookshelf depths. The high mounting of the woofers minimizes excessive bottom end, which can arise if the A-50 is placed on the floor. Like our other speakers, the most realistic reproduction will usually be achieved when it is mounted near ear level in most rooms. All but the A-50 are supplied with hangers for wall mounting. The efficiency of the A-50 matches the A-25 and A-35, but it really comes into its own when driven by a high power amplifier like the Stereo 400. Then, as Norman Eisenberg said in *High Fidelity* magazine, "We soon found ourselves... listening to the program material rather than the equipment."

The A-25XL differs in two respects: efficiency and high frequency response. With about 3 dB higher efficiency than the A-25, it's like having an amplifier of twice the power. This significant change required much coincident effort to assure retention of a similar sonic character. The XL version utilizes a newly developed soft dome tweeter which has higher power handling capacity, some 3 KHz extended high frequency response, and improved polar dispersion. The XL series is also capable of handling appreciably higher continuous power levels. *High Fidelity* magazine reported, "If you liked the original A-25, you will like the new version at least as much. It offers a little more detail at the frequency extremes than its predecessor, but the sound of the two versions is so similar that they should make excellent companions..." *The Absolute Sound* magazine also provided an apt comparison. Their complete report is available on request.

The newest entry is the A-40XL, with the avowed intention of combining the best features of the A-35 and the A-25XL. Utilizing the dual compartment cabinet for an accurate low end, with the higher efficiency and

higher power rating of the drivers in the XL series and a different crossover network, the A-40XL is characterized by a smooth, robust sound characteristic with a notably extended and uniformly dispersed high end.

The XL series was specifically designed to deliver maximum performance at the currently popular high listening levels with all-too-often inadequately powered amplifiers or receivers. The A-25XL is popularly priced, and the A-40XL offers more-than-subtle refinements at modestly higher cost.

Users seeking maximum performance systems, who are impressed with the soundness of the basic Dynaco speakers, have reported increasing enthusiasm for multiples of similar models. Two, four, and even six speakers per channel are being employed where extraordinary power handling capacity, greater dispersion and much versatility are wanted at moderate cost. We'll supply hookup details on request. A-25s are probably most often selected for their cost and adaptability to equalization. A-25XLs are preferred when projection, maximum output and freedom from overload are the primary considerations. Their relatively uniform impedance characteristics and high value quotient make them thus particularly suitable.



A look at the drivers on a stock A-25.

A word about speaker power ratings. There are currently no U.S. standards. The specifications are rated according to the accepted German DIN spec #45500. Simply stated, this standard specifies a noise signal, uniform between 50 and 5,000 Hz, applied cyclically for one minute on, two minutes off for 300 hours. In our estimation, all speakers should be rated thus. It would obviate the invalid music and peak power ratings which only confuse the buyer.

The suggested amplifier power range is a minimum that is likely to provide indication of the speaker's potential, up to the maximum wattage generally regarded as safe at normal listening levels. Lower power



amplifiers can make just as loud sound, but it won't be "clean". Operation with amplifiers above the stated range is permissible, and will in fact yield better sound, but the speaker *must* then be properly protected with a fuse.

On music signals: speaker protection is afforded only by low amperage fuses. Many do not realize that typical fuses blow only with a *sustained* signal of 20 seconds or more at *twice* their current rating. Too, wide impedance variations of most speakers alter the apparent powers passed, based on simple fuse rating calculations. And "clipping" of lower power amplifiers is more likely to damage a speaker than sensible operation of a high power amplifier. More information for fusing Dynaco speakers will be provided on request. Note, though, that speaker fusing is advisable with all but the lowest power amplifiers.

Frequency response is missing from our specifications because it defies meaningful quantification. The only useful comparison is precise graphs made under identical conditions, and even they are difficult to equate to listening. Your ear is still the best judge. And remember to equalize volume levels, because the louder speaker will invariably impress you more at first. Sustained listening may alter your initial impression.

Dynaco's success in the loudspeaker field is based on the same factors as its success in electronics. As Julian Hirsch wrote in *Stereo Review*, "Dynaco has long been noted for its development of inexpensive components capable of the highest quality performance... (the) A-25, we are happy to note, lived up to our expectations."



The drivers on an A-40XL system. (from eBay Item #395241756; originally incorrectly labeled as an A-35)

## Specifications:

SPECIFICATION	A-10	A-25	A-25VW	A-25XL	A-35	A-40XL	A-50
<b>Recommended amplifier Range (watts)</b>	20-60	20-60	20-60	15-100	20-60	15-100	30-100
<b>DIN Power Rating (watts)</b>	35	35	35	50	35	50	50
<b>Tweeter</b>	1.5"	1.5"	1.5"	1"	1.5"	1"	1.5"
<b>Woofers</b>	6.5"	10"	10"	10"	10"	10"	(2) 10"
<b>Tweeter Control Positions</b>	N/A	5	3	3	5	3	5
<b>Replaceable Grille</b>	no	no	no	yes	yes	yes	yes
<b>Enclosure Design</b>	aperiodic	aperiodic	aperiodic	aperiodic	dual chamber aperiodic	dual chamber aperiodic	dual chamber aperiodic
<b>Dimensions W x H x D</b>	8.5" x 15" x 8"	11.5" x 20" x 10"	11.5" x 20" x 10"	11.5" x 20" x 10"	12.5" x 22.5" x 10"	13.5" x 22.5" x 10"	21.5" x 28" x 10"
<b>Shipping Weight</b>	12 lbs.	24 lbs.	24 lbs.	25 lbs.	30 lbs.	32 lbs.	47 lbs.
<b>List Price</b>	\$99.95/pr.	\$79.95 ea.	\$79.95 ea.	\$89.95 ea.	?	?	\$179.95 ea.
<b>Production Date</b>	1971	1969	1974	1976	1972	1975	1971

## Designed by:

A-25 originally designed by M. Stauning of SEAS Fabrikker

Ed Laurent was Director of Speaker Development at Dynaco from 1970-1976.

## Comments:

Dynaco speakers were designed using Seas drivers, and imported to the USA under the Dynaco name.



Interestingly the earliest A-25's used ScanSpeak Drivers and had the Aperiodic Port above the Tweeter, but this was soon changed to the widely seen Seas Drivers and the port under the woofer.

The production was set up that a large excursion, a 5 Hz square wave was fed into the unit, and layers of fiberglass were inserted into the body of the box, until there was minimum overshoot, which translated into maximally flat response at 50 Hz and below.

Above info courtesy Steven L. Bender.

Dates courtesy Mark McNally and Ed Laurent. Additional info from Jim Elliott and Mark Korda.

Ed Laurent notes that over 1,000,000 A-25s were eventually sold; Dynaco would import the finished speakers in containers of 1100 units and drop-ship them to dealers or large customers. Approximately one container per week passed through the shipping department for several years!

The major change made to the original A-25 speaker prior to introduction was that Ed insisted that they be manufactured to have 8 ohm impedance instead of the nominal 4 ohms provided by the original prototype drivers.

While Ed Laurent was in charge of speaker design, the Phase 3 systems (phase-aligned tower systems) were designed and released. Data on these speakers is scanty, but I am hoping to add another section devoted to them in the near future.

In the late 1970s, speaker development was taken over by Fred Shavarabi and the LMS (Laboratory Monitor Series) systems were released. Designed mainly by Kingsbridge Electronics in Canada, the LMS series did not meet with the universal acclaim of the A-25 and A-35 speakers. Info on the LMS speakers is also scarce, but as more is collected, they too will be discussed on this page.

Starting approximately in 1981, Panor Corporation apparently released a new series of Dynaco equipment through their Hauppauge NY offices. It is not clear how this meshed with the Dynaco brand owned by Stereo Cost Cutters / Sound Values, but a series of Dynaco speakers titled the A-150, A-250, and A-350 were sold in the US during the 1980s. They were manufactured in suburban Boston, near the Advent factory, and seem to have been replaced by a new series including the A15, A38, and "Amazing Bass" subwoofer during the 1990s. If info on the LMS speakers is scarce, info on these units is practically nonexistent save for fragmented ads and review snippets which have been contributed by visitors to the site. An attempt to add to the knowledge base for these speakers will also be made.

For those looking to replace drivers on their 1970s-vintage Dynaco speakers; check out [the Morel Co.](#) for a drop-in replacement A-25 Tweeter, the MDT20; or [Madisound](#) for generic replacment/rebuild parts. It's also worth investigating [Sound Valves](#) web site for the occasional closeout audio parts bonanza.

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