

# PROGRESSIVE SPEAKER EXPANSION

a new approach to personalized listening . . .

by *University*

A modest budget need no longer limit the quality and caliber of your hi-fi aspirations. University offers, for the first time in audio history, a tremendous selection of uniquely designed speaker and network components so brilliantly conceived and executed that it is now possible to develop your loudspeaker system in successive, relatively inexpensive stages . . . until what you have meets your listening requirements.

**P**rogressive **S**peaker **E**xpansion by University makes it possible for you to buy a speaker today in terms of the system you want tomorrow! You are thus able to devote your present budget primarily in the initial selection of quality amplifying and program source equipment which cannot be economically altered or substituted at a later date. **P-S-E** makes your speaker choice an easy one. Depending upon your goal and space limitations, there are numerous University speaker systems that can be started at minimum cost with immediate listening satisfaction.

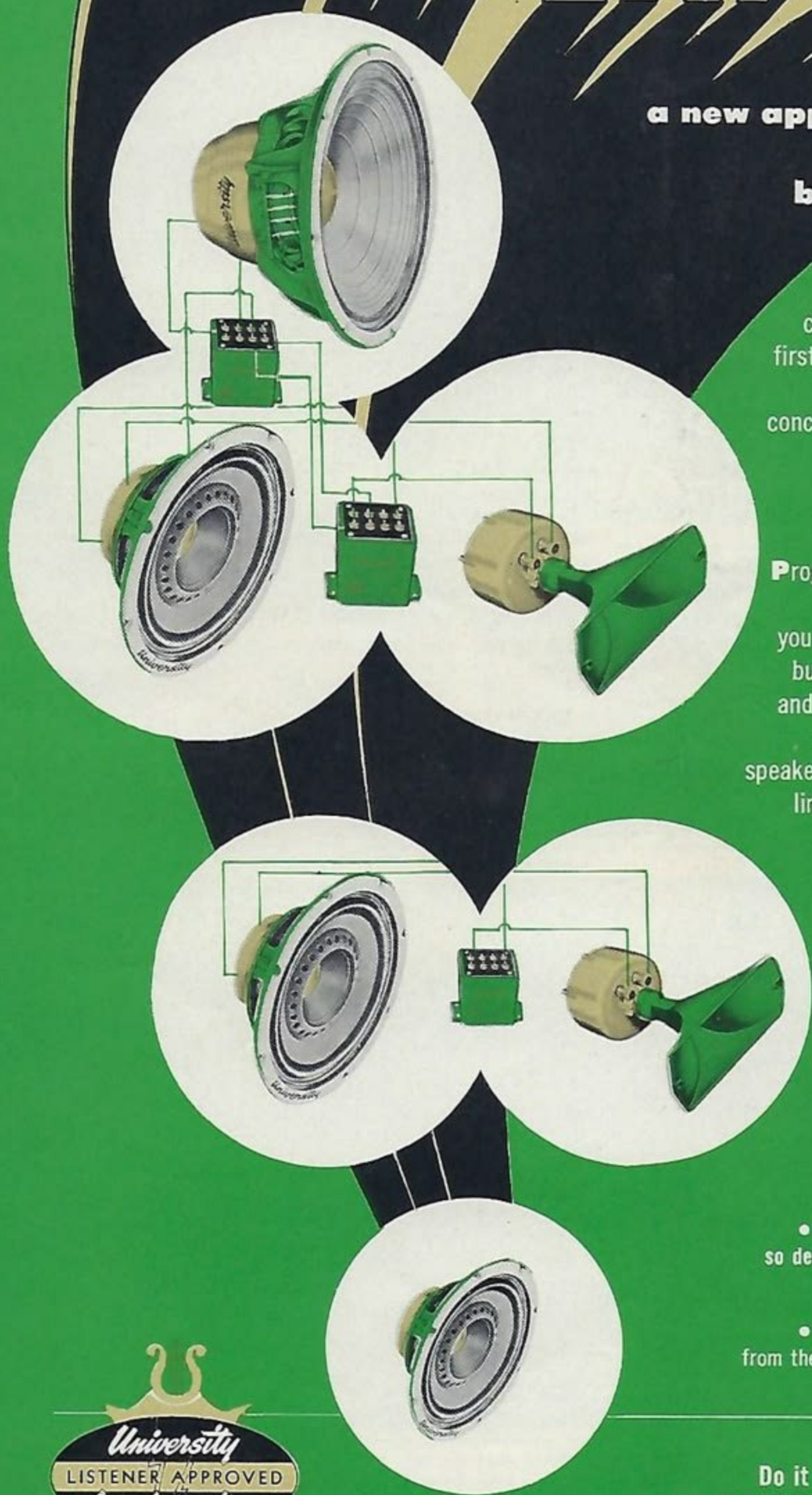
start planning today . . .  
the *University* way!

- Buy good amplifier and program source equipment which will do justice to your eventual University speaker system . . . and start with one of the versatile top quality speakers or combinations recommended in the **P-S-E** chart.
- Build up to a deluxe speaker system with University components so designed that speaker and network can be easily integrated for better and better sound reproduction—without fear of obsolescence.
- Own a **P-S-E** speaker system which meets hi-fi quality standards from the very beginning—and reach the highest standard of all—YOUR OWN.

Do it with University **P-S-E**! Only University products can meet such flexibility of application and demanding performance requirements.

## *University Loudspeakers*

80 SOUTH KENSICO AVENUE, WHITE PLAINS, NEW YORK



**A**  
**Model 6201 Dual Range System.** Acknowledged as the industry's finest value in a high quality 12" loudspeaker. Complete with coaxial tweeter driver and wide angle horn, it is one of the few true dual range systems. Built-in L/C network and balance control. Eight ohms impedance, 25 watts power capacity.



**B, C**  
**Diffusicone—8" and —12" Coaxial Speakers.** Exclusive patented "Diffusicone" design with 1000-cycle mechanical crossover results in full fidelity anywhere in the room . . . full undistorted response without loss of highs at listening points progressively off speaker axis. Eight ohms impedance, 25 watts power capacity.



**D**  
**Model 6200 Extended Range Speaker.** Full bodied response to beyond 10,000 cycles makes it ideal for radio, TV and phono applications. Excellent basic unit. Eight ohms impedance, 25 watts power capacity.

## For Listening Pleasure That is Performance



**F**  
**Model 308 8" Triaxial Speaker.** For high fidelity installations where space is at a premium and quality is not to be compromised. Eight ohms impedance, 25 watts power capacity.



**G**  
**Model 312 12" Triaxial Speaker System.** Embodies the "Diffusicone" principle for full bodied mid-range and incorporates the HF-206 Super Tweeter for clean, brilliant highs. Built-in L/C network and "balance" control. Eight ohms impedance, 25 watts power capacity.



**H**  
**Model 315 15" Triaxial Speaker.** Reproduces entire range with such full-bodied clarity that its superior quality of "presence" is readily apparent. "Diffusicone" device for mid-range, driver type horn assembly for highs. Built-in L/C network. Eight ohms, 50 watts power capacity.

## University Loudspeakers — A Complete

**Exclusive** University speakers, utilizing "automatic rim centering" of the voice coil, are fabricated to such close mechanical tolerances that they are the **only** speaker with "bi-sectional" design in which the voice coil/diaphragm and the magnetic assemblies can be interchanged in the field. This ensures everlasting buzz-free, shock and vibration-proof performance.



**I**  
**Model C15W Dual Impedance Range Super 15" Woofer.** Acme of attainable perfection in the specific reproduction of low frequencies. Host of exclusive engineering features. Adjustable voice coil permits match to 4-8 ohms and 10-16 ohms. Defies obsolescence. For 50 watt systems.



**J**  
**Model C12W 12" Adjustable Response Woofer.** Contains exclusive built-in facilities for limiting high end response to 700, 2000 or 5000 cycles, thus suiting crossover requirements of most tweeters.

## Designed for Value and Engineered for

**L**  
**Model 4401 Tweeter.** Uses "reciprocating flares" wide angle horn and bona fide compression driver. Exceptional performance for such low cost. Eight ohms impedance. Suitable for crossover down to 2000 cps.



**M**  
**Model 4402 Wide Angle Dual Tweeter.** Electrical and acoustical characteristics make it the most versatile high frequency tweeter available. 120° dispersion; can be connected for use in 4-8 and 10-16 ohm systems. High power capacity. For 2000 cycle crossover or above.

**N, O**  
**Models 4408 and 4409 Tweeters.** For crossovers down to 600 cycles. Model 4408 for moderate power systems 4409 is heavy duty version. "Reciprocating Flares" wide angle horn. Eight ohms impedance.



## to Meet Every Speaker Need and System

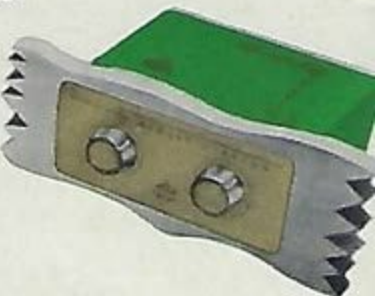
**Q**  
**Model N-1 Adjustable High Pass Filter.** Built-in continuously variable high frequency control. Matches 15 ohms to 1250, 2500, 5000 cycle crossover; eight ohms to 2500, 5000, 10,000 cycles; four ohms to 5000 and 10,000 cycles.



**R, S**  
**Model N-2A, N-2B Adjustable L/C Dividing Network.** With either or both of these network units, any combination of speakers can be used in a great variety of popular crossover points from 350 to 5000 cycles at 4, 8 and 16 ohm impedances in two or three-way systems. Adaptable for use as either 6 or 12 db rate of cut-off.



**T**  
**Model N-3 Three-way Crossover Network.** Complete with built-in continuously variable "Presence" and "Brilliance" controls. For 8 ohm 3-way systems using 350 and 5000 cps crossovers. Flexible mounting arrangements.





**E**

**Model Cobreflex-2/T-30 Assembly.** For use in 2 or 3-way systems when crossover as low as 350 cycles is desired. Exclusive dual wide angle horn. Eight ohms impedance; suitable for heavy duty operation.

**Proven—**

**Exclusive** The University heavy duty all-alnico 5 "W" shape magnet reduces by 50% the reluctance and surface leakage losses common to the conventional "slug" and "ring" type assemblies. This means tremendous power saving, increased efficiency and superior handling of "transients".

**Line**



**K**

**Model C8W 8" Low Frequency Reproducer.** Ideal for assembling a compact, limited space, high quality system . . . Perfect, too, as mid-range unit in low cost three-way system. Can also be used in multiples as expanding woofer. Eight ohms impedance, 25 watts power capacity.

**Quality**

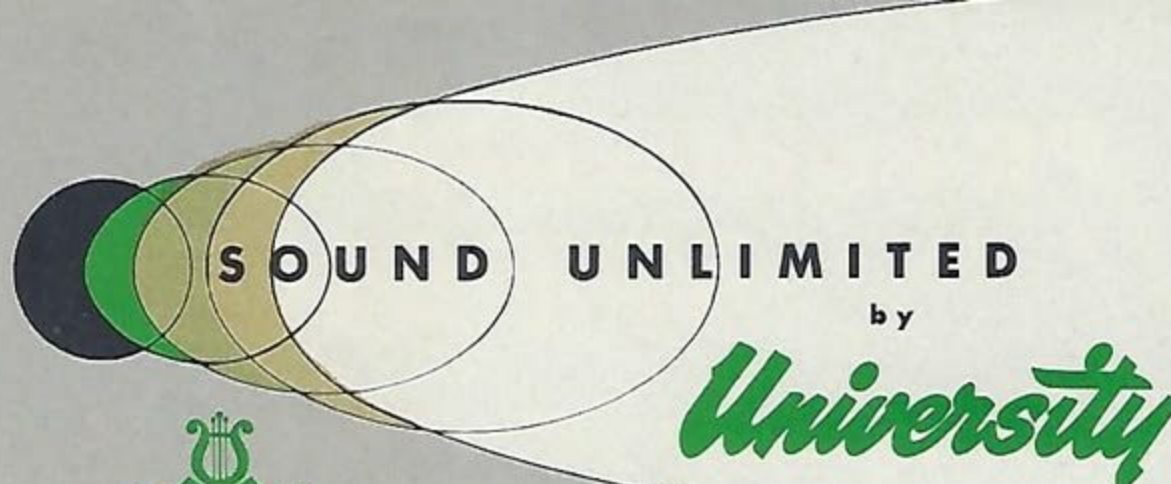


**P**

**Model HF-206 Super Tweeter.** High frequency response far beyond audibility. Super-efficient, new driver and horn assembly using exclusive "reciprocating flares" principle. Suitable for crossover 3500 cycles or above. Eight ohms impedance.

**Requirement**

**Exclusive** The patented "reciprocating flares" principle used in University tweeter horns avoids the erratic polar response of multi-cellular and other type wide angle horns. Serious acoustic phase cancellation and distortions are eliminated, and vertical field energy never exceeds horizontal dispersion as occurs in other types in portions of the working range. **Uniformity** of response and dispersion is the signature of University tweeters.



**SPEAKER  
CODE**

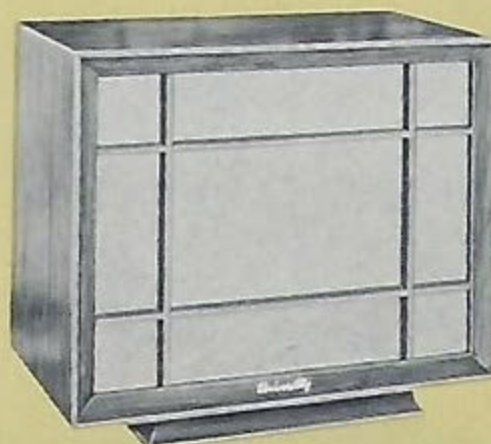
**A** — 6201      **F** — 308      **K** — C8W      **P** — HF-206  
**B** — Diffusicone-8      **G** — 312      **L** — 4401      **Q** — N-1  
**C** — Diffusicone-12      **H** — 315      **M** — 4402      **R** — N-2A  
**D** — 6200      **I** — C15W      **N** — 4408      **S** — N-2B  
**E** — Cobreflex-2      **J** — C12W      **O** — 4409      **T** — N-3  
 with T-30 driver

| START WITH  | BUILD TO                                                 | BRIEF DESCRIPTION                                                                                                                                                             |
|-------------|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>KLQ</b>  | <b>KLQJ</b><br><b>KKKKLQ</b>                             | low cost 2-way space saver<br>economy 3-way using 12" woofer<br>2-way with quadruple 8" woofer                                                                                |
| <b>B</b>    | <b>BLQ</b><br><b>BLQJ</b><br><b>BLQK</b>                 | wide-range 8" coaxial with mechanical crossover<br>low cost 3-way space saver<br>economy 4-way using 12" woofer<br>3-way space saver with dual 8" woofer                      |
| <b>D</b>    | <b>DLS</b><br><b>DDMS</b><br><b>DJLQ</b><br><b>DIPRS</b> | low cost extended range 12" speaker<br>economy 2-way system<br>dual 12" woofer 2-way system<br>economy 3-way system with 12" woofer<br>3-way system with 15" woofer           |
| <b>C</b>    | <b>CLQ</b><br><b>CJMQ</b><br><b>CJPS</b><br><b>CIPRS</b> | wide-range 12" coaxial speaker<br>with mechanical crossover<br>low cost 3-way system<br>dual 12" 3-way system<br>4-way system with 12" woofer<br>4-way system with 15" woofer |
| <b>F</b>    | <b>FK</b><br><b>FJ</b>                                   | modestly priced 8" triaxial speaker<br>low cost 3-way space saver with dual 8" woofer<br>low cost 4-way system with 12" woofer                                                |
| <b>A</b>    | <b>AJ</b><br><b>AIR</b><br><b>AJR</b>                    | 2-way dual range speaker<br>dual 12" woofer 2-way system<br>3-way system with 15" woofer<br>3-way system with 12" woofer                                                      |
| <b>G</b>    | <b>GJ</b><br><b>GIR</b>                                  | 12" triaxial speaker<br>dual 12" woofer 3-way system<br>4-way system with 15" woofer                                                                                          |
| <b>H</b>    | <b>HI</b>                                                | 15" triaxial speaker<br>dual 15" woofer 3-way system                                                                                                                          |
| <b>JNR</b>  | <b>JNRLQ</b>                                             | modestly priced 2-way system with 12" woofer<br>economy 3-way system with 12" woofer                                                                                          |
| <b>IOR</b>  | <b>IORPS</b>                                             | 2-way medium power system with 15" woofer<br>3-way medium power system with 15" woofer                                                                                        |
| <b>IER</b>  | <b>IERPS</b>                                             | 2-way high power system with 15" woofer<br>3-way high power system with 15" woofer                                                                                            |
| <b>IEPT</b> |                                                          | deluxe 3-way system                                                                                                                                                           |

NOTE: Circuit diagrams available for each system listed. Write Technical Service Department.



**The Dean.** For use in a corner or equally efficient flat against a wall. You'll be amazed at the results from the C15W 15" woofer, Cobreflex-2 with T-30 driver for the mid-range and the HF-206 for the highs. N-3 network used to cross over at 350 and 5000 cycles. The enclosure is a newly designed compression type folded front-loaded horn so completely independent of the walls and floor of a room that it is truly the one and only "cornerless corner" cabinet. By unique internal design, wasted space has been eliminated so that the overall dimensions of this sensational system are only 36¼" high, 36" wide, 22" deep. Available in Cherry Mahogany or Blond at no extra cost. Impedance 8 ohms, power capacity 50 watts. The DEAN enclosure is available separately as Model EN-D in Cherry or Blond.



**The Classic.** Containing the incomparable C15W 15" woofer, Cobreflex-2 with T-30 driver for rich full-bodied middles, the new HF-206 Super Tweeter and the N-3 network complete with "Brilliance" and "Presence" controls, the Classic incorporates some of the finest University engineering achievements. The enclosure is the versatile, newly designed folded front-loaded horn which operates the C15W woofer as a compression driver for maximum efficiency. Due to this design, the acoustic performance of the CLASSIC is independent of the walls and floor of the room and may be used either as a "lowboy" console or "highboy." Base is adjustable for this purpose. Dimensions: 34½" x 40½" x 24¾". Available in Cherry Mahogany or Blond at no extra cost. Impedance 8 ohms, power capacity 50 watts. The CLASSIC enclosure is available separately as Model EN-C in Cherry or Blond.



**EN-15 Master.** The EN-15 is a continuation of the principle refined by University in which the best features of rear-horn loading, phase inversion, and direct radiation are integrated to result in a highly efficient, extended range enclosure capable of unusual power handling capacity and excellent transient response.

The EN-15 is equipped to mount either a 12" or 15" coaxial or triaxial speaker. Accommodation has also been made to take University mid-range and high-frequency reproducers for use in 2 or 3 way combinations. A 12" woofer such as the C12W Adjustable Response Low Frequency Reproducer, or the Dual Impedance Range C15W 15" woofer may also be used.

Made of heavy, fully-cured woods throughout and finished on 5 sides, the EN-15 may be used in either a corner or flat against a wall. Available in Cherry or Blond Mahogany at no extra cost. Dimensions: 37" x 28" x 19¼".



**EN-8 Mighty Midget.** Hit of every Audio Fair across the nation, University now makes available this special 8" speaker enclosure which was originally designed to demonstrate the remarkable Diffusicone-8 coaxial speaker. Incorporates combination rear horn loading for unexcelled power handling and distortion control, and tuned horn mouth for phase inverter action for increased bass efficiency. Only 25½" x 18" x 12".

The EN-8 may be used ideally with the new Model 308 Triaxial speaker. It also has cut-outs for the 4401 tweeter and C8W 8" woofer combination, if desired. Available in Cherry or Blond Mahogany at no extra cost; also in unfinished Mahogany.

**CUSTOM DESIGNED FOR *University* SPEAKER SYSTEMS**

A selection of fine speaker enclosures engineered to acoustically enhance the performance of University speakers. Tastefully styled to complement the decor of your home rather than dominate it.

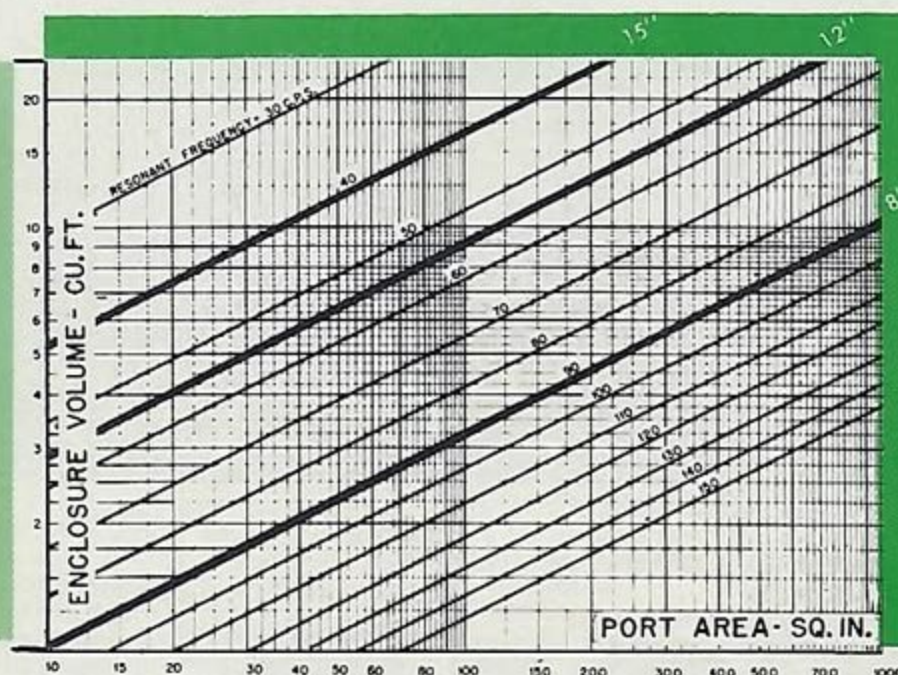
## When Building Your Own Bass Reflex Cabinet...

Popularity of the bass reflex type baffle is due to its relative ease of construction, small space requirements, and satisfactory overall performance. Decide upon the dimensions of the baffle to be built, in accordance with physical requirements, but try to keep the inside depth of the cabinet to not less than 12". All sides should be made of heavy, seasoned wood (preferably 3/4" plywood). All corners must be thoroughly braced to prevent buzz noises at cabinet resonance. The removable side (usually the back) should be secured at the corners, as well as approximately every 4" along the edges. All of the back side and fifty per cent of the remaining inner surfaces of the cabinet should be lined with a sound ab-

sorptive material, such as celotex, rockwool, etc.

**Tuning the Port.** The port of a bass reflex baffle is considered properly tuned for best low frequency response of the speaker system when the bass response has been equalized and spread out over as wide a range as possible. Peaking or excessive boominess is an indication of an improperly dimensioned port.

The chart shown indicates optimum port area for given cabinet volumes and loudspeaker free air resonances. Once the port area is determined, the actual dimensions will not be found to be critical. The heavily shaded lines on the chart are for use with the size University speakers indicated.



**University Loudspeakers**  
WHITE PLAINS, NEW YORK

**Write for latest catalog describing the entire University high fidelity line of speakers and accessories.**