

This is the E-V Carlton phase loaded enclosure with recommended E-V components in place.

# Electro-Voice® MAKES HI-FI HISTORY WITH EXCITING NEW PHASE LOADED ENCLOSURES

For the first time—and only from Electro-Voice—you get performance from along-the-wall speaker enclosures which approaches the performance of a corner horn! E-V does it with the exciting new principle of PHASE LOADING, the most important advance in baffle design since the Folded Corner Horn!

Designed specifically for use along a wall, phase loaded cabinets give you almost a full added octave of bass range and completely eliminate the "boomy" characteristic of bass reflex enclosures.

Flat, fundamental response is obtained *two* ways with PHASE LOADING:

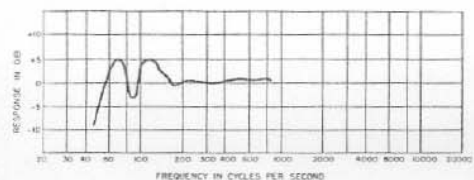
*First*, by placing the driver at the rear of the cabinet close to the floor, and facing the wall. The wall and floor act as reflecting surfaces, close and almost equi-

distant from the driver cone, eliminating phase difference between reflections and the source.

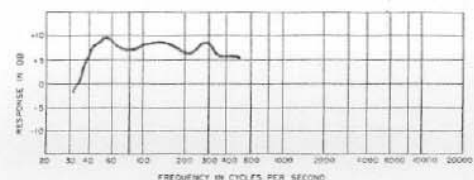
*Secondly*, Phase Loading permits a sealed cavity behind the cone, of precise volume. The compliance of this cavity, in conjunction with the mass of the cone, is made to react with the mass and compliance of the outside air throughout the second octave, adding this range to the response not otherwise attainable except through corner horns.

The low crossover of 300 cps makes this system possible, for higher frequencies are not propagated properly by indirect bass radiators.

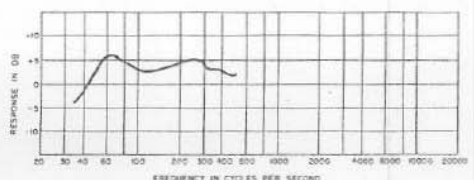
The application of these principles in E-V's PHASE LOADING gives full-bodied, extended low-bass hitherto unavailable. Musical balance is achieved for the first time in an along-the-wall system.



This curve shows performance of the usual 4-way systems in a bass reflex cabinet. Note the dip at 85 cps, which shows the destructive cancellation and the gain...

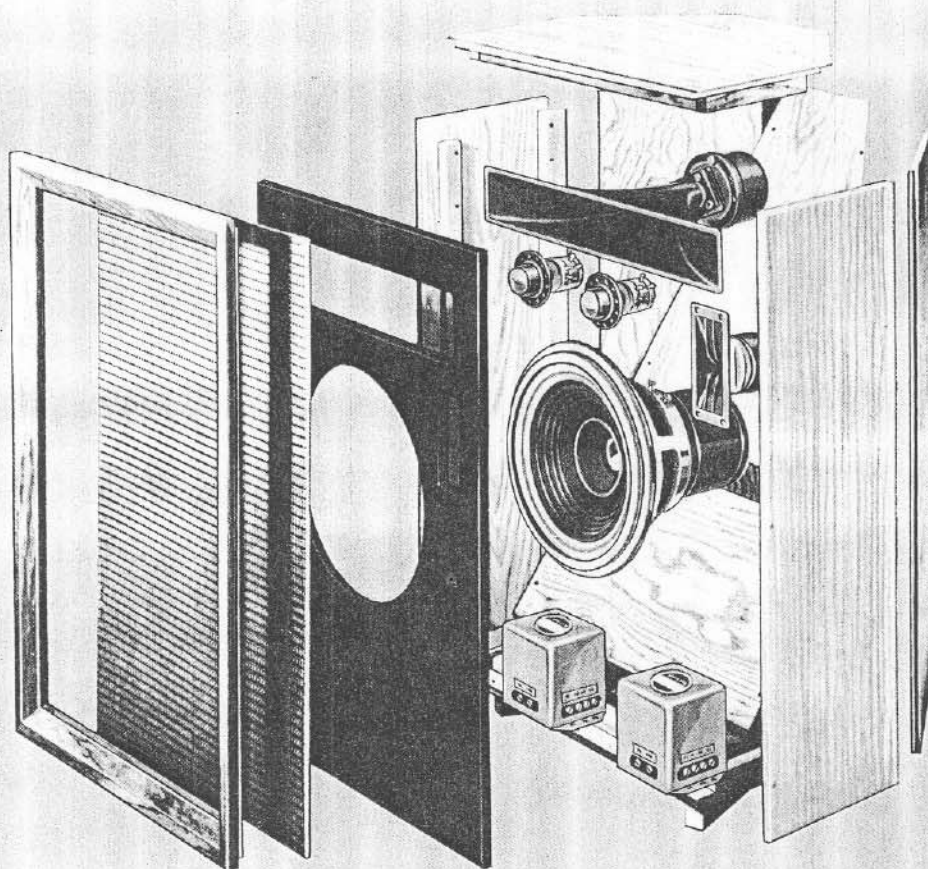


This curve shows the smoothness throughout, the extra response and the extended bass response you get...



This is E-V phase loading. As you can see, performance in an along-the-wall position closely approaches that...

# FOR HI-FI ON A BUDGET, FOLLOW THE ELECTRO-VOICE BUILDING BLOCK PLAN



Start with your basic speaker and improve your compatible E-V high-fidelity system one economical step at a time by adding Electro-Voice Speaker Building Blocks.

Here, we've started with an SP12—12-inch coaxial driver. Later, you add BB2—a T35 very-high-fre-

quency driver, X36 crossover and AT37 level control with wiring harness. BB2, Net \$50. Still later, augment with the BB4—to smooth and disperse treble range, it includes T25A treble driver, with 8HD horn, a second crossover—800-cps X8—and a second AT37 level control with wiring harness. BB4, Net \$114.

## Build Your Own E-V Speaker Enclosure with a Pre-Cut, Pre-Cleated 'Do-It-Yourself' Kit

There's no thrill like building your own speaker enclosure! Economize on your hi-fi system without sacrificing quality by assembling an E-V knock down kit of Korina plywood. Korina is of highest quality, naturally light in color, harder than mahogany, allows finishing to match any shade. There are seven models to choose from.

Shown dis-assembled is E-V's KD6 kit. Assemble it and you have a duplicate of our factory-built ARISTOCRAT enclosure of folded horn corner design for use with 12-inch drivers or separate multi-way systems. KD6, Net \$39.

For all the facts about Electro-Voice 'Listened' high-fidelity components, see your

**Electro-Voice**®

ELECTRO-VOICE, INC. BUCHANAN, MICHIGAN



## CARLTON PHASE LOADED SPEAKER ENCLOSURE

### GENERAL DESCRIPTION--

High styling, for the first time, is now available in a high-fidelity speaker enclosure. Electro-Voice brings you the Phase Loaded CARLTON speaker enclosure, in rich contemporary cabinetry. With its handsome low-boy design, the CARLTON is the perfect companion to the SHERATON Equipment Console. This beautiful, new speaker enclosure comes equipped with either the Model 105E deluxe 15-inch, 4 way components completely wired and installed, or Model 117B 15-inch standard speaker system. Available in lustrous Tropical Mahogany, exciting Limed Oak, or rich Walnut, the CARLTON harmonizes gracefully with modern furniture modes.

### FEATURES--

**PHASE LOADING --** Is the newest Electro-Voice exclusive contribution to your enjoyment of high fidelity. Designed specifically for use along the wall, your new Phase Loaded CARLTON achieves almost a full added octave of bass range and completely eliminates the "boomy" characteristics of bass reflex enclosures. Flat, fundamental response is obtained two ways with Phase Loading:

First, by placing the bass-driver at the rear of the cabinet close to the floor, and facing the wall. The wall and floor act as reflecting surfaces, close and almost equi-distant from the driver cone, eliminating phase difference between reflections and the source.

Secondly, Phase Loading employs a sealed cavity behind the cone of precise volume. The compliance of this cavity, in conjunction with the mass of the cone, is made to react with the mass and compliance of the outside air throughout the second octave, adding range to the response not otherwise attainable except through corner horns. You hear all of the music in correct phase, full bodied and full range.

### FUNCTIONAL BEAUTY--

Acoustic perfection must sometimes be sacrificed to achieve a beautiful furniture piece. However, through the combined efforts of the accomplished custom furniture designer, Robert W. Fuldner, and E-V's scientists and engineers, beauty and functionality both are attained in the CARLTON.

### FINISH AND QUALITY--

The beauty and durability of any furniture piece is dependent upon the finish and grade of the hardwoods used in its construction.

Before fabrication, each panel is electronically moisture tested to insure freedom from warping and cracking of the veneers. Only panels with 9 percent or lower moisture content are employed. This is unusual compared to conventional lumber standards. Precision metal dies are used to cut and fit the hardwoods to decimal tolerances, rather than the traditional fractional tolerances.

After careful machine sanding, each assembly is joined by hydraulically operated holding fixtures. Under high pressure, each joint and tenon is precision fitted for non-variance and uniformity. Still more fine grain sanding precedes staining and sealing, followed immediately by drying in humidity controlled ovens. This is followed by final sanding to achieve perfect finish before the hard lacquer protection is applied. A final trip through the ovens presents a complete furniture piece ready for rubbing, waxing and polish to superior satin gloss, determined scientifically by a Martin-Spears Glossmeter. Thus, insurance is afforded against the disagreeable glass-like finishes which disclose a grease-like high-halation appearance, exposing the smallest dust particles and finger marks.

#### VERSATILITY--

-- of the CARLTON is exemplified in its ability to complement any modern home furniture outfit. Available with either deluxe Model 105E, or standard Model 117B speaker systems, the CARLTON will fill the needs of most high fidelity enthusiasts.

#### ACOUSTICORE--

-- is the amazing inner structural material used in all E-V cabinets. This non-warping material is composed of small wood particles compressed and fused with resins to provide a homogeneous core without internal stresses. Acousticore resonates at lowest frequencies below the range of audibility, affording top fidelity of response. Thus another E-V first insures the dependable and lasting service of your new CARLTON speaker Enclosure.

#### SPEAKER SYSTEMS AVAILABLE--

The CARLTON, in order to preserve the uninterrupted front panel motif, is available only as a complete Phase Loaded system with the 105E Deluxe, or 117B standard system, CARLTON IV and CARLTON IVA respectively.

#### MODEL 105E IN CARLTON IVA--

This deluxe 4-way component system employs Model 15WK specialized "K" type low-frequency driver crossing over at 300 cps through the X336 network to the MT30 coaxial mid-bass and treble driver-horn assembly. Newly developed Model T350 Ultra-Sonax VHF driver takes over at 3500 cps  $\pm 2-1/2$  db to 21 kc. Includes 2 AT37 level controls for "Presence" and "Brilliance" adjustment, and wiring harness.

### MODEL 117B IN CARLTON IV--

The economy Model 117B 4-way system consists of Model 15BWK specialized "K" type driver crossing over at 300 cps to the MT30B coaxial mid-bass and treble driver-horn assembly, (integral acoustic crossover at 1000 cps.) The T35B Super-Sonax VHF driver is fed by an X336 crossover unit at 3500 cps to 18 kc. The system is complete with wiring harness and AT37 "Presence" and "Brilliance" controls.

The above speaker systems come completely installed in operational readiness.

### INSTRUCTIONS FOR UNPACKING--

You will receive your CARLTON Speaker Enclosure in a carefully packed, well-padded carton.

STEP 1. Position carton so that end marked UP is facing up.

STEP 2. Cut the bottom interlocked steel band.

STEP 3. Slide the carton up and off of enclosure.

STEP 4. Remove excess padding.

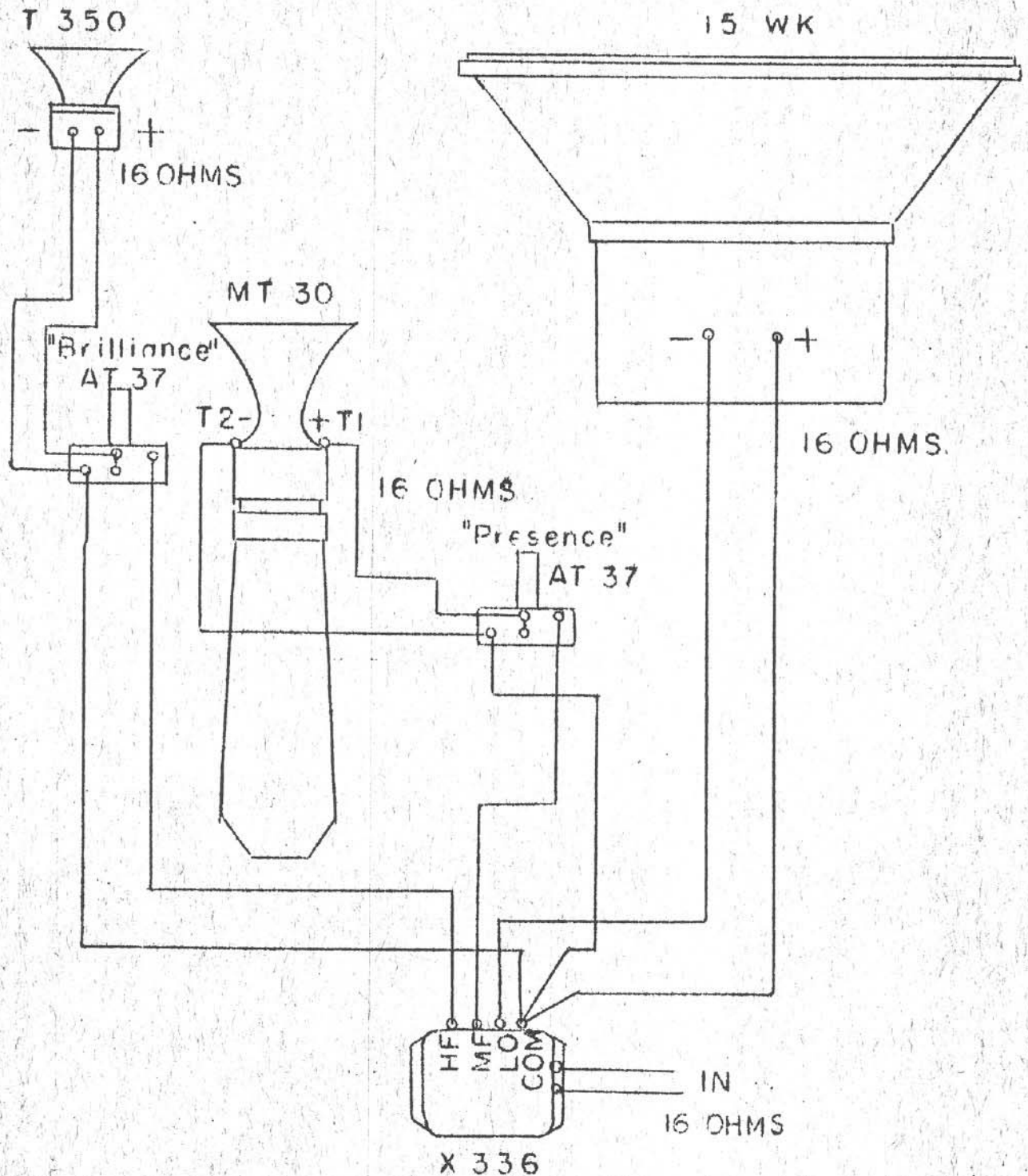
The CARLTON IV and IVA are completely wired and ready to connect to your amplifier.

### OPERATION--

PLACEMENT--for optimum performance, the CARLTON should be placed along the wall of a room, with the back of the enclosure approximately three inches from the wall surface. This spacing is not critical. Connect the system to the amplifier by running two leads (fixture wire No. 18) from the "Common" and "16 ohms" amplifier output taps to the lead-in wires of the system. The phasing of the positive and negative lead-in wires to the amplifier is critical only if two or more speakers are used in the same room. The CARLTON is now ready for operation.

ADJUSTMENT OF LEVEL CONTROLS--Level controls are provided for adjusting the amount of energy fed to the mid-range and very-high-frequency drivers in the 105E and 117B phase loaded systems. The level control marked "Presence" controls that frequency range lying in the region between 800 cycles and 3500 cycles, and the "Brilliance" control governs the amount of energy radiated above 3500 cycles. Generally, as a starter, because of the increased efficiency of these high-range drivers, the "Brilliance" should be set at 5, and "Presence" control set at 7. Vary the adjustments slightly for most pleasing reproduction. Rooms having heavy drapes, thick rugs or overstuffed furniture, will usually require a more advanced setting of the "Brilliance" control than normal situations. To achieve a "Front Row" effect, the reproduction of the mid-range reproducer may be enhanced by advancing the "Presence" control to full "on".





CARLTON 105E SYSTEM  
 (WIRING FOR 117B SYSTEM  
 SAME AS ABOVE)

ELECTRO-VOICE, INC.  
 BUCHANAN MICHIGAN

CONNECTION +  
 NO CONNECTION +  
 RED = POS +  
 BLACK = NEG. -

Part No. 53496

MIMED IN U.S.A.