Electro-Voice®

ELECTRO-VOICE, INC.
BUCHANAN, MICHIGAN

Specifications and Instructions Centurion Enclosure Centurion IV and Senior Centurion IV

The Electro-Voice Centurion IV and Senior Centurion IV employ identical cabinetry, and differ only in the driver components. The Centurion IV uses the Model 117 system consisting of a 15BWK low-frequency driver, 847HF mid-range coaxial driver, T35B Super-Sonax VHF driver, X336 crossover network, cable harness and two AT37 level controls. The Senior Centurion IV uses the Model 105 driver components consisting of the 15WK low-frequency driver, 848HF coaxial mid-range assembly, T35 Super-Sonax VHF driver, X336 crossover network, two AT37 level controls and a cable harness.

The Centurion uses the exclusive Electro-Voice "W" type folded horn. The "W" horn is a single path indirect radiator utilizing the room corner. The completely sealed rear cone air load is used as an acoustic compliance to resonate with the inductive mass of the air in the horn throat, forming a broadly tuned low-frequency resonant circuit which extends and augments the lower bass spectrum of the loudspeaker. Because of the relatively small number of parts, and short length of the horn, efficiency is very high, and radiation in the low-bass and important mid-bass regions approaches that theoretically possible from a perfect horn.

The Centurion is a corner horn type enclosure, and for best reproduction should be placed in a corner situation. The Centurion may, however, be used along a side wall if an artificial corner is constructed behind it. Such a corner should be of a minimum height of 40 inches and have minimum side wall lengths of 4 feet intersecting at 90° behind the loudspeaker. Response of the Centurion is enhanced by more than 6 db below 200 cycles when used in a corner.

SPECIFICATIONS

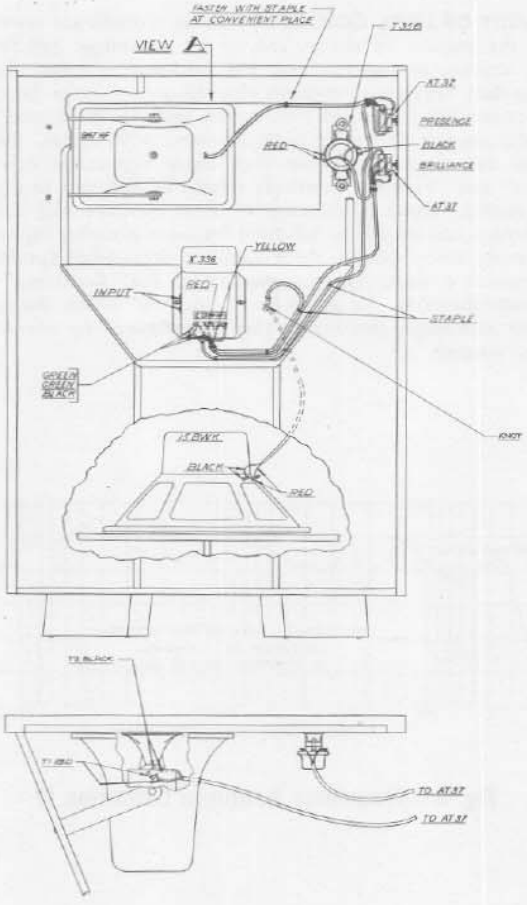
	Centurion IV	Senior Centurion IV
Sensitivity Rating:	48 db	51 db
Power Rating:		
Program:	20 watts	35 watts
Peak:	40 watts	70 watts
Size:	40 in. high, 30 in. wide, 22½ in. deep	
Shipping Weight:	94 lb	132 lb
	(54 lb. Centurion Cabinet only)	

INSTALLATION

15-INCH DRIVER. To install the 15-inch Klipsch type low-frequency driver, remove the screws from the periphery of the low-frequency cavity, accessible through the back port of the enclosure. Install the driver in place as shown in Figure 1. The 15-inch driver is inserted through the top hole on an angle and then rotated into position. Place the driver so that the four rim holes coincide with the T-nuts in the speaker mounting board. Insert machine screws and washers and tighten them evenly and just snugly enough to avoid injuring and distorting the loudspeaker frame. Attach leads to the 15-inch driver and feed through the hole in the top of the enclosure. Follow Figure 1 and Figure 2 for proper color coding to insure correct phasing of the driver.

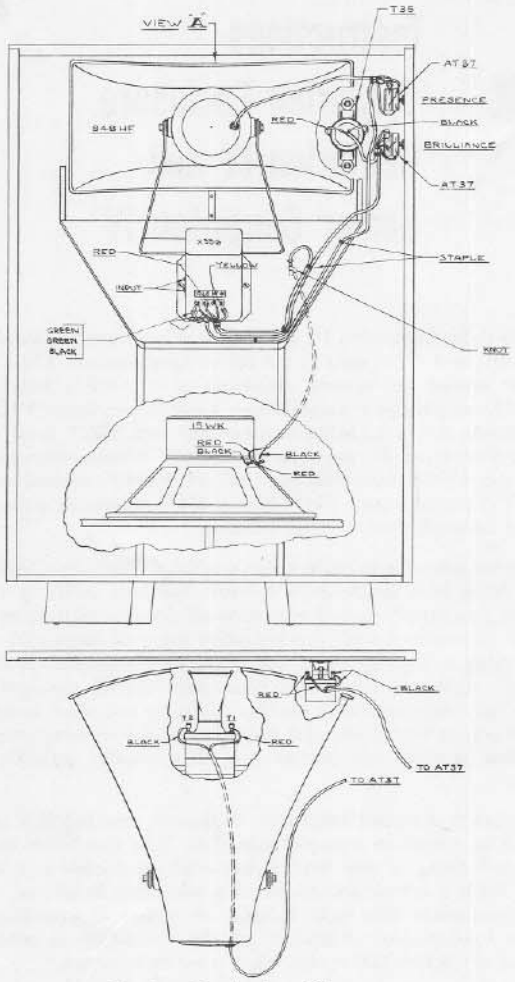
MID-RANGE DRIVER — The installation of mid-range drivers differs for the Centurion IV and Senior Centurion IV.

In the Centurion IV, with Model 117 system, the Model 847HF driver is used. The 847HF is bolted to the inner cabinet right-hand dividing panel with two ¼ x 20 bolts. The 847HF brackets should be tightened after the unit is in place to assure proper positioning. Wire the 847HF before mounting, following the wiring diagrams shown in Figures 1 and 2 for the Centurion system.



Centurion IV

Fig. 1 — Pictorial Wiring Diagram



Senior Centurion IV

Fig. 1 — Pictorial Wiring Diagram

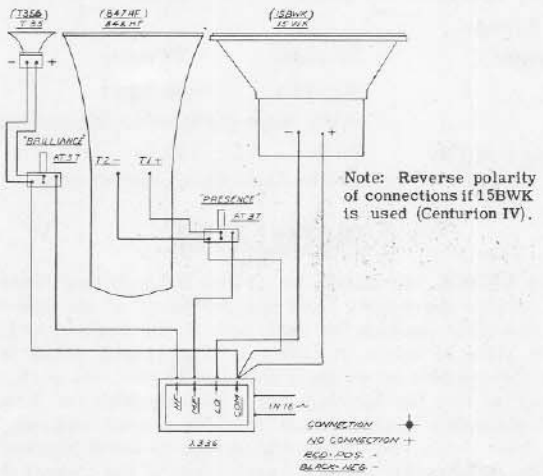


Fig. 2 — Schematic Wiring Diagram

In the Senior Centurion IV the Model 848HF coaxial mid-range assembly is used. The 848HF mounts with the bracket placed on top of the low-frequency driver cover, and is bolted in place with the front lip of the 848HF resting on the shelf divider toward the front of the bass horn path. In mounting the Senior Centurion IV mid-range driver, the T35 Super-Sonax VHF mid-range driver must be installed first for when the 848HF is mounted in place, the mounting slot for the T35 will no longer be accessible.

INSTALLATION OF CROSSOVER — The X336 crossover network is mounted on top of the low-frequency driver cover. The crossover is fixed in place with four wood screws through the corners of the crossover case. Connections should be made to the various crossover terminals as shown in Figures 1 and 2.

Insert the AT37 level controls with the lugs toward top of cabinet under the decals marked "Presence" and "Brilliance". Replace the AT37 dials and affix them by tightening the lock nuts with a pair of long-nosed pliers. Replace the knobs on the AT37 controls and note to be sure that the dot on the knobs coincide with the zero on the dial at maximum clockwise rotation.

VHF DRIVER — To install the T35 (or T35B) VHF driver, place the driver in position on the small vertical port, making certain it seats tightly against the gasket. Put the special half-cork-covered washers in place on the back of the driver horn. Follow this by conventional washers and nuts, tightening carefully.

OPERATION

PLACEMENT — The Centurion can now be placed in the corner of the room or along the wall. Connect the system to the amplifier by running two leads (fixture wire No. 18) from the "Common" and "16-ohm" amplifier output taps to the lead-in wires of the system.

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 117 and 105 four-way systems. The level control marked "Presence" controls that frequency range lying in the region between 300 cycles and 3500 cycles, and the "Brilliance" control governs the amount of energy radiated above 3500 cycles. Generally, because of the increased efficiency of these high-range drivers, the "Brilliance" and "Presence" controls should be adjusted to a partially retarded setting. Exact positioning of these controls will depend on room acoustics and should be adjusted 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.

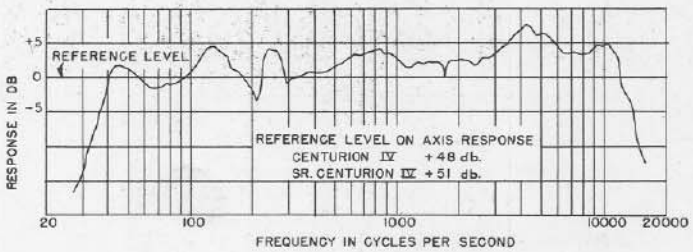


Fig. 3 — Frequency Response Centurion IV