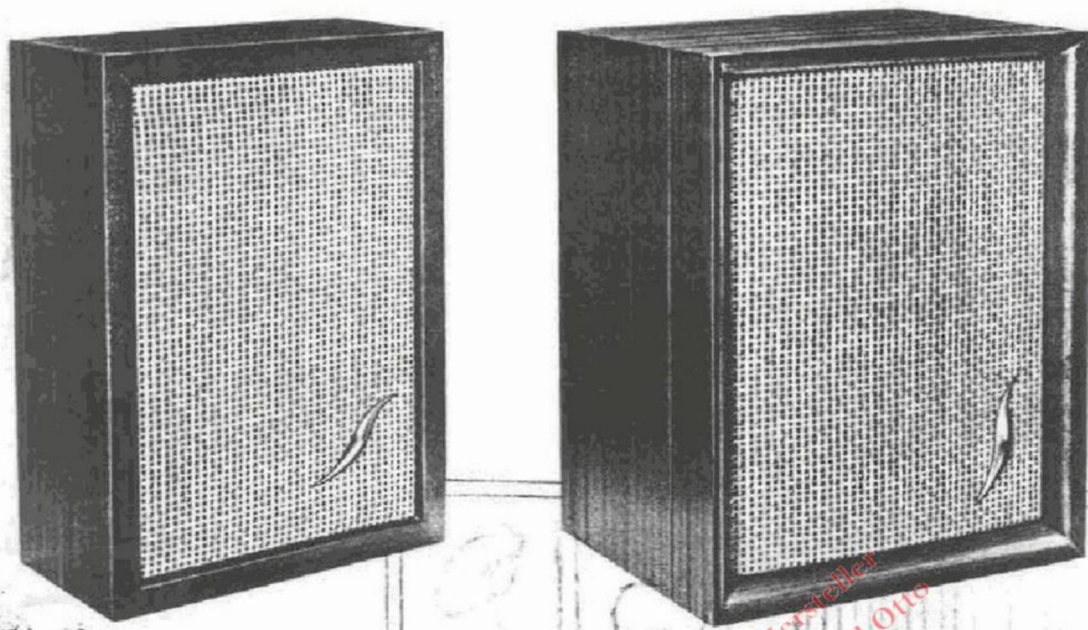




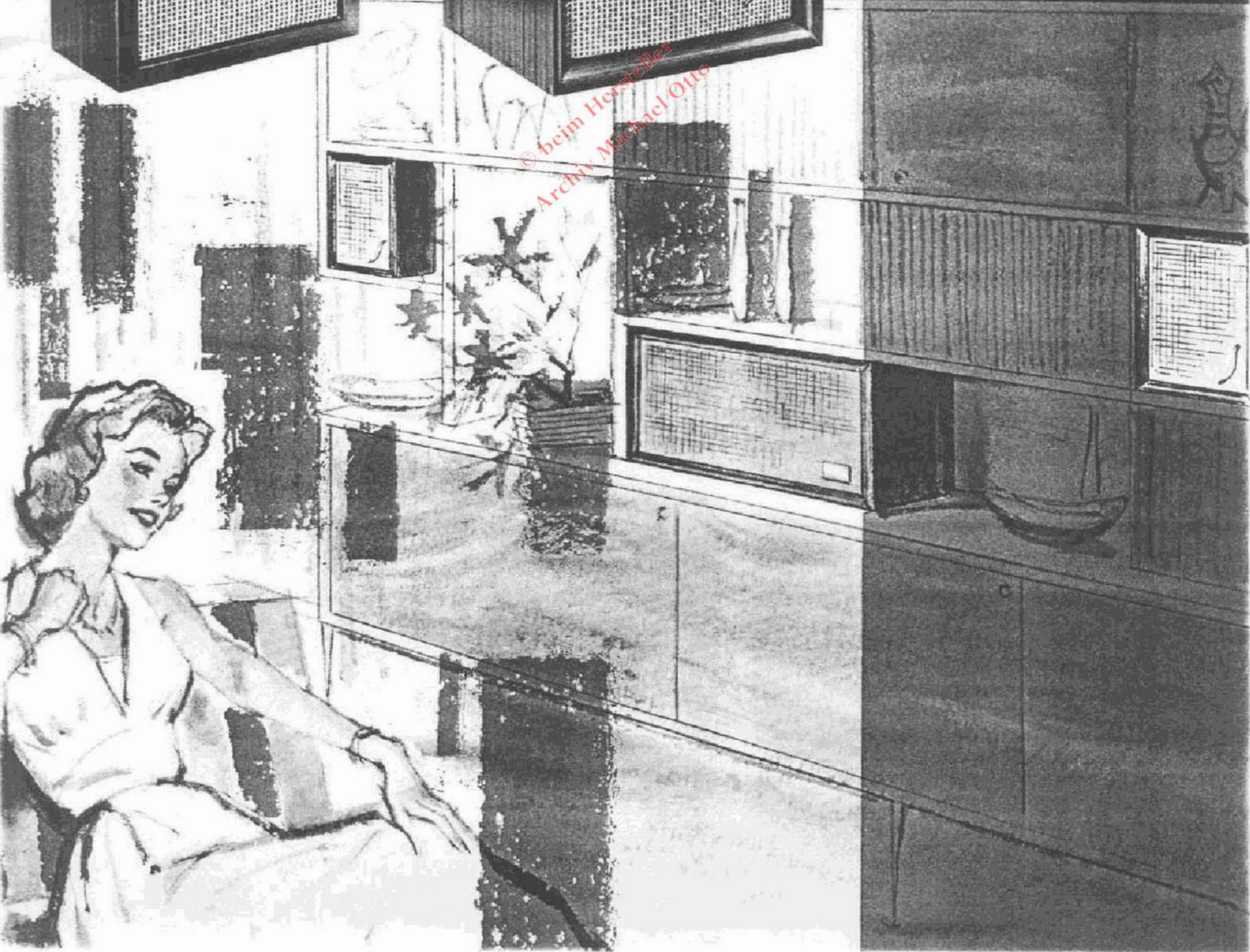
*Electro-Voice*<sup>®</sup>

# STEREONS

STEREONS 100 AND 300  
ADD-ON UNITS FOR 2-  
OR 3-CHANNEL STEREO



- LOWEST BASS RANGE FOR ITS SIZE
  - HIGHEST EFFICIENCY OF ALL AVAILABLE ULTRA-COMPACT SYSTEMS
- HIGH AMPLIFIER POWER NOT REQUIRED
  - SEPARATE 3-WAY COMPONENTS FOR SMOOTHER LISTENING AND LOWEST DISTORTION
- BEST STEREO BECAUSE OF PATENTED ELECTRO-VOICE SONOPHASE DESIGN
  - FINE FURNITURE



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Archiv Michael Otto

# Electro-Voice®

## STEREONS 100 300

### INTRODUCTION

The Electro-Voice STEREONS are speaker systems of a new kind, designed to solve space problems encountered in reproducing stereophonic sound. These simple, inexpensive units are designed to match specific full-range systems, i.e.:

STEREON 100 LEYTON, ESQUIRE  
STEREON 300 REGAL 300, ROYAL 400

They are offered in two models only for the sake of *matching sounds* with their complementary full-range systems.

Employing cabinets of pleasing, inconspicuous proportions for easy placement, the STEREONS are designed particularly to complement the Electro-Voice ultra-compact, low-resonance systems which conserve space while retaining low distortion characteristics and wide-range response.

The STEREON 100 employs a special 8" extended range speaker and is designed to complement the E-V LEYTON low-resonance, ultra-compact systems.

The STEREON 300, with slightly different cabinet styling, employs a two-way system consisting of a RADAX extended-range speaker, together with a diffraction horn very high frequency driver. It is designed to operate with the ROYAL 400, REGAL 300 and ESQUIRE 200 systems.

### SPECIFICATIONS

	STEREON 100	STEREON 300
<i>Nominal Impedance:</i>	8 ohms	8 ohms
<i>Power Handling Capacity:</i>		
Sine Wave —	200 cps.-up, 30 W., max.	200-2500 cps., 30 W., max.; 2500-20,000 cps., 5 W., max.
Program —	Maximum undistorted output of 50 W. amplifier on complex program signal.	Same as STEREON 100
<i>Frequency Response Range:</i>	170-13,000 cps.	170-19,000 cps.
<i>Components:</i>	Special 8" extended range speaker and 200 cps. high-pass filter.	Special 8" extended range speaker, T35B very high frequency driver and a crossover assembly contains: 3500 cps. crossover, 200 cps. high-pass filter, brilliance control.
<i>Size:</i>	14" high x 10" wide x 5 5/8" deep	14" high x 11 1/2" wide x 8 3/8" deep
<i>Finishes:</i>	Hand-rubbed mahogany, walnut, or limed oak; unfinished birch.	Same as for STEREON 100

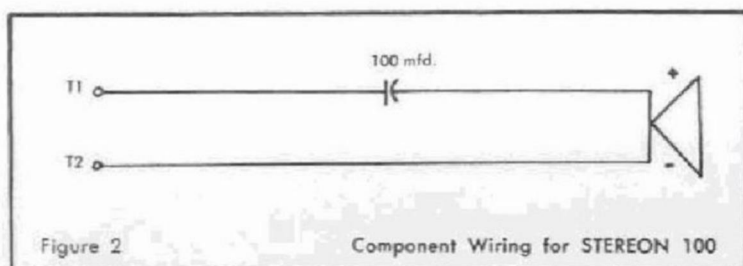


Figure 2

Component Wiring for STEREON 100

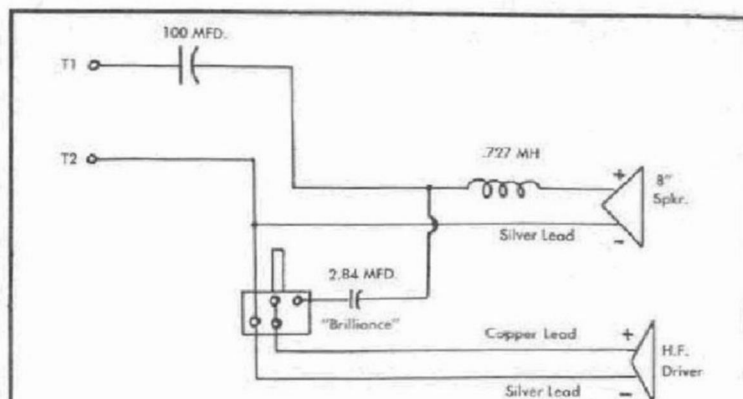


Figure 3

Component Wiring for STEREON 300

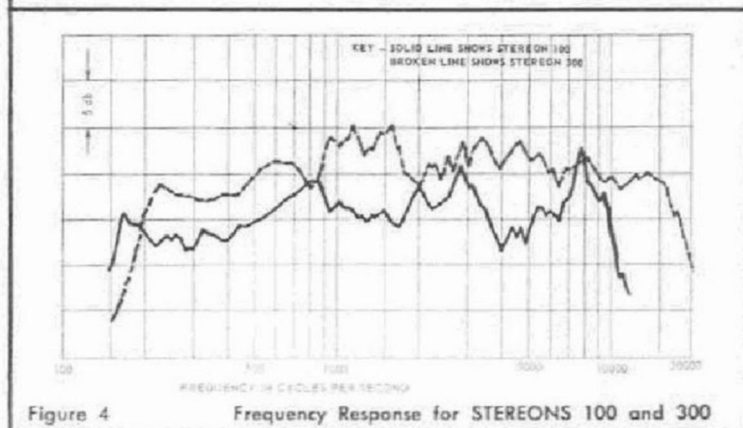


Figure 4

Frequency Response for STEREONS 100 and 300

### Theory of Operation

No stereophonic effect exists when listening to sounds below 300 cycles per second, since the human ear is incapable of determining the origin of such sounds. This was proved in 1934 by an acoustic engineer, Harvey Fletcher, who determined that sounds from about 300 cps. down, with a wavelength of 3-2/3 ft. or more, are not intercepted to any detectable degree by the head. Consequently, both ears hear them alike, and no determination of the direction of the source is possible. The STEREONS make use of this principle, when used with a full-range speaker which reproduces all the bass from both channels, while sounds above 200 cycles per second are fed through both channels in the normal stereophonic manner. The STEREONS, then, permit easy and economical expansion to the stereo system.

### Setting Up For Operation

#### Unpacking Your Unit

Your Electro-Voice STEREON has been packed in accordance with all shipping requirements of the Interstate Commerce Commission plus extra protection. Upon opening carton inspect unit closely. If any shipping damage is found, contact the carrier immediately, requesting inspection and instructions. *Avoid excessive handling of STEREON units in unfinished birch.* Moisture marks from hands should be completely removed from wood surface before finish is applied. See your Electro-Voice dealer for details on the complete range of Electro-Voice Finishing Kits available for easy professional finishes in many attractive tones.

#### Placement

The convenient sizes of the STEREONS provide great flexibility for your stereophonic system. Both models are designed to fit nicely into bookshelves or other room locations in which the use of larger units would be impractical. Their compact design can, in many room arrangements, add extra usable floorspace and provide the pleasant "airy" quality sought by modern interior designers.

Connection and Operation for 2-channel Stereo using one STEREON 100 and one LEYTON or one STEREON 300 and choice of ESQUIRE 200, REGAL 300 or ROYAL 400.

Connection:

Connect amplifiers, speakers and XT-1 in accordance with Fig. 6. Use standard #18 or heavier lamp cord.

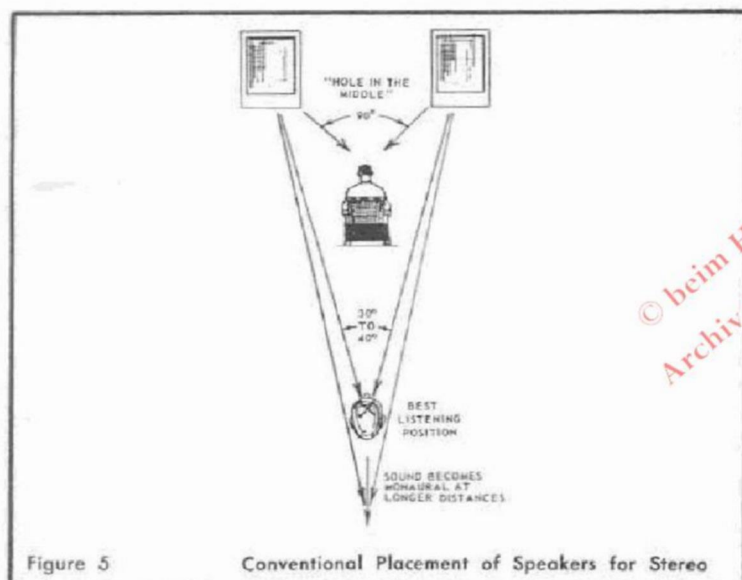
## Checking for Proper Connection:

This can most easily be accomplished by playing a monaural disc or full track monaural tape through the stereo system. With equal sound output from each channel and listening in optimum listening area as shown in Fig. 5 the sound should appear to come from a point located midway between the two speakers. If the sound image appears to be split and seems to emerge simultaneously from each speaker rather than from the midway point, the speakers are out of phase. This can be corrected by reversing the connections at one speaker or the other, but not both.

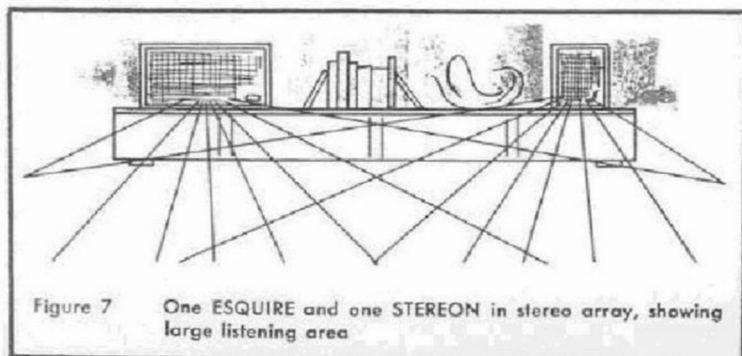
With both speakers still playing at equal sound levels, check for proper XT-1 connection by interchanging leads 1 and 2 (see Wiring diagram) and listening for maximum bass. Connection of maximum bass is the correct connection.

## Placement for Stereo

Fig. 6 illustrates the placement of a pair of conventional speakers for stereo; the narrow beam of sound gives good stereo in only one restricted listening position in the room. If the listener is too far forward from the apex of the triangle, the angle becomes greater than 40 degrees, and the performance area will seem to split in the middle or diverge. If the listener is too far back, the angle becomes much less than 30 degrees, and the sound from the two speakers will become so nearly alike that the result will be a loss of stereophonic effect.



This limitation of a small stereo listening area with conventional loudspeakers is largely solved by the design features of the treble range component in the Electro-Voice STEREOONS. The 8" cone speaker gives wide dispersion of the stereo sounds (mid bass and treble) assisted by the shallow cone design which prevents masking of tone propagation by the section near the outer periphery, and in the case of the STEREOON 300, exceptional spread through the diffraction horn driver. Good stereo may be enjoyed by a number of people (See Fig. 7) by observing the simple placement rules of having the STEREOONS at either corner of the triangle, the angle at the apex of which is from 30 to 40 degrees.



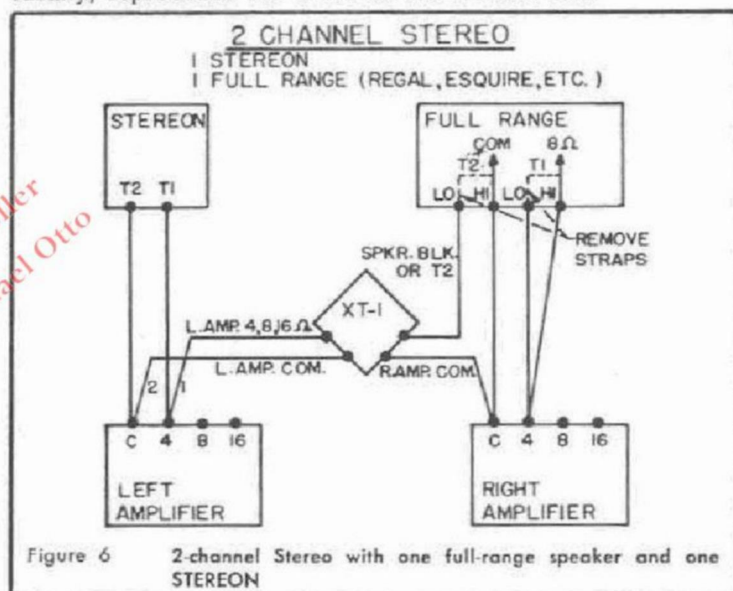
## Widening the Stereo Area - 3-channel Listening

The natural extension of 2-channel stereo reproduction is to recreate completely the original performance suitably tailored to suit the individual taste and listening area. In stereo recording great pains are taken to capture every realism of the music and to insure that nothing of the life and reality of the original performance is lost.

In modern stereo recording 3 microphones are normally employed to insure complete coverage of the sound stage. The sound from the microphone in the center is then apportioned to both left and right channels of recorded sound. From this master recording emerges the commercially available 2-channel stereo tape or disc.

In these "two track" stereo tapes and discs the element of this third channel remains and can be reformed by means of the Electro-Voice XT-1 Stereo Mixer Transformer. The XT-1, connected as shown in Fig. 8, recovers the center sound from the left and right channels, adds them together in the correct proportions, and passes them to the central speaker. (Technically, the third channel signal consists of A plus B sum tones.)

Thus a still broader curtain of sound is created, giving good stereo over a larger area, even in listening positions quite close to the loudspeakers themselves. Stereo reproduction, ideally, reproduces the effect of the concert hall.



## Connection and Operation for 3-channel Stereo using either choice #1 or choice #2

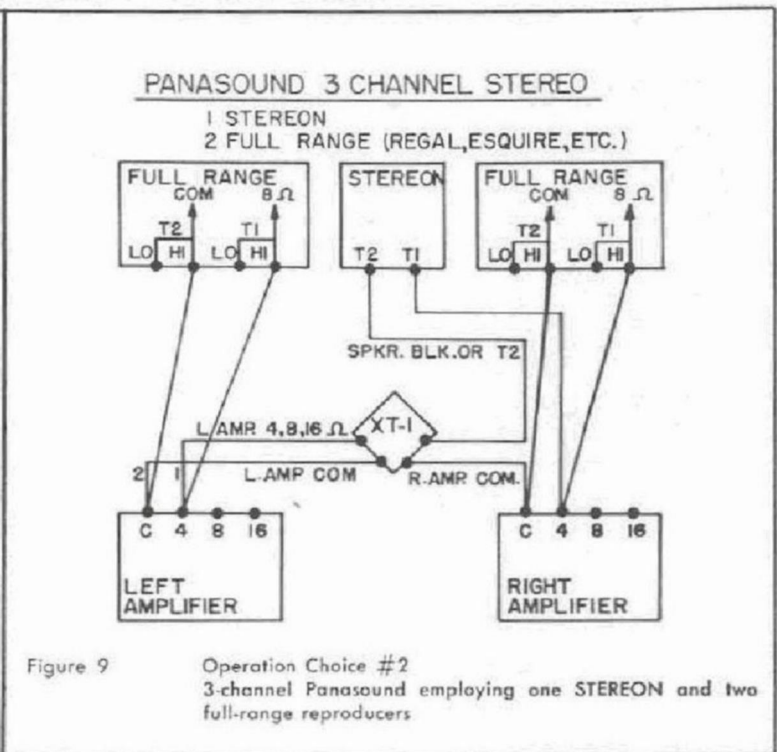
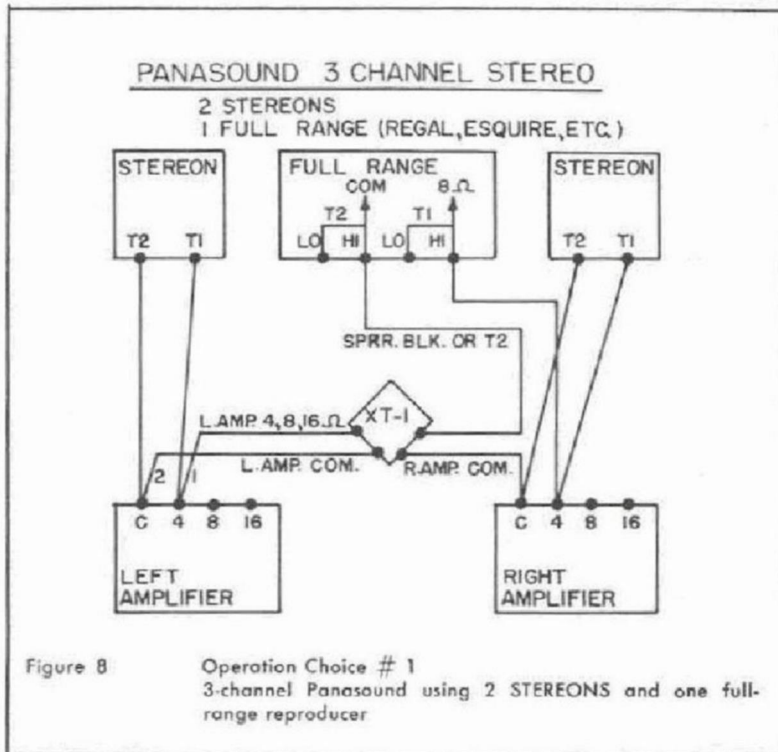
### Connections for both choices:

This can most easily be accomplished by playing a monaural disc or full track monaural tape through the stereo system. Temporarily disconnect one of the leads going to the center speaker and set amplifier volume controls for equal sound output from left and right speakers. While listening in the optimum position the sound should appear to emerge from a point midway between the left and right speakers. If the sound image appears to be split and seems to emerge simultaneously from each speaker rather than from the midway point, the speakers are out of phase. This can be corrected by reversing the connections at either the left or right speakers, but not both. With left and right speakers still playing at equal sound levels, reconnect the center channel. Interchange leads 1 and 2 at XT-1 (See diagram) while listening in close proximity to the center speaker. The connection giving maximum output from the center speaker is the correct connection.

### Operation - choice #1 only:

Using stereo source material, turn treble array control completely counterclockwise on center speaker (full-range in this case.) The system is now a 2-channel system. Adjust

# SELECT APPROPRIATE WIRING DIAGRAM FOR 3-CHANNEL STEREO THEN OBSERVE POLARITY CAREFULLY



amplifier controls for desired loudness balance between right and left channels. Now gradually turn treble array control clockwise until hole in middle is just filled when listening fairly close to the speaker array. The setting of this control will vary in accordance with listener preference.

### Operation — choice # 2 only:

It is recommended that an AT37 level control be installed in leads running to center speaker for this case. With treble array controls in left and right speakers fully on (clockwise) balancing system on stereo source should proceed as in choice # 1.

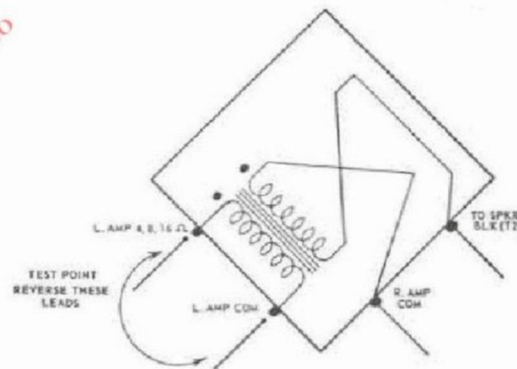
### For Both Choices:

**Brilliance controls setting:** For most disc recordings in normal listening environments this control should be set to "normal" position. The setting of the best balance will vary with environments and listener preference. However, it is important that the Brilliance controls be set alike on all three speakers. There are no brilliance controls on the Leyton and Stereon 100, since these units do not contain VHF drivers.

### Technical Service:

The distributor from whom you purchased your equipment knows thoroughly the application of Electro-Voice products and high-fidelity techniques. His advice on the installation of Electro-Voice components and on the selection of associated high-fidelity equipment will be invaluable. Technical problems which cannot be answered locally may be referred to:

The Manager  
High Fidelity Division  
Electro-Voice, Inc.  
Buchanan, Michigan



When writing, please list the manufacturer and model number of all components used in your high fidelity system.

### Speaker Repairs

Your STEREO system is guaranteed indefinitely against defects in workmanship or materials. Should the STEREO become damaged or develop faulty operation from unusual conditions of use, Electro-Voice maintains a complete service department to put equipment in factory-new condition. If it becomes necessary to return the equipment for repair, please write for authorization and shipping instructions.

**Electro-Voice®**

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