



**ALTEC LANSING®**

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LEGACY PRODUCT LINE

## User's Guide

**305 S**

**508 S**

**510 S**

# 305 S/508 S/510 S

## INTRODUCTION

Welcome to the extraordinary world of Altec Lansing high fidelity sound. As you are about to discover, you have acquired a loudspeaker system that can bring your world of recorded music to life.

Altec Lansing has accomplished this by reissuing speakers famous for recreating perfectly the timbre, texture and power of every musical composition. And to coordinate these components, for truly remarkable sound, we refined the "art of balance". Even our hand crafted cabinets have been specially designed for optimum musicality. The result... loudspeakers so pure, so uncompromising they capture the very soul of sound.

For the optimum placement, proper connection, and use of your Altec Lansing loudspeaker system, be sure to read this manual thoroughly and retain it for future reference.

## UNPACKING

Each loudspeaker is wrapped in a protective bag with poly-foam corners and the tweeter/midrange drivers are covered by protective poly-foam. Remove the bag and the poly-foam protection. The grille is in a separate box in the master carton. Remove the grille from its box and install it. Notice that the grille has 6 protruding studs. These studs mate with the plastic sockets in the cabinet. To install the grille, make sure the Altec Lansing logo is oriented at top, gently press the two top studs into the top part of the cabinet and then press the two in the bottom, the middle ones will just fall in place.

We suggest that you save the shipping carton and packing materials for future use.

## CONNECTING THE SPEAKER TO THE AMPLIFIER

Various stranded wires are available to connect your speakers to the amplifier. For distances up to 20 feet, 14 AWG (American Wire Gauge) works well. For larger distances, 11 AWG is recommended. The smaller the gauge number, the larger the cross section diameter of the wire. The larger diameter wires provide maximum transfer of audio power with little loss of energy. In addition they provide maximum electrical damping (better control of speaker movement at low frequencies).

When estimating the length of wire required for each speaker, allow a few extra feet. This is necessary because you may have to experiment to find the best location for maximum speaker performance, then cut the wires to exact size.

Prepare the wires by stripping half of the insulation from the ends of the wire. Once the insulation is removed, twist the copper wire so that it will go into the speaker terminals more easily. See Fig. 1. If the speaker must be repeatedly moved, connecting the speaker wires to banana plugs may be desirable. These plugs are available at all audio outlets.

Notice that most wires have some kind of marking (either a color strip or ridges) that allow you to differentiate one conductor from other. These markings are important for phasing of the speakers. To obtain maximum bass response it is important that all speakers operate in union (speakers are phased).

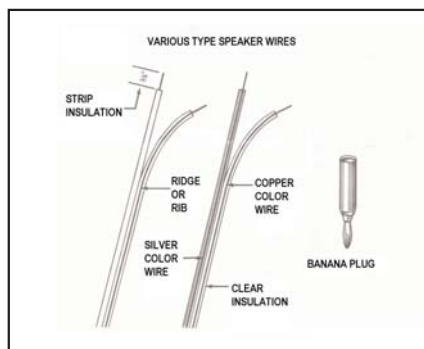


FIGURE 1

## MODEL 305 S AND MODEL 508 S

The input terminals are arranged so that each speaker is connected to a single amplifier with one set of wires.

## MODEL 510 S

The speaker input terminals are arranged so that each speaker can be driven by a single amplifier. The speakers can also be hooked up for tri-wiring simply by removing the terminal jumpers (numbered as 1 and 2 on Fig 2B.) The jumpers are removed by turning the terminal heads counter-clockwise and removing the jumper. Retighten the terminals after jumpers are removed. In this arrangement the woofers, midrange, and tweeters are each connected to the amplifier by their own set of wires.

Each speaker has its own crossover network. See [www.alteclansing.com](http://www.alteclansing.com) for additional wiring options.

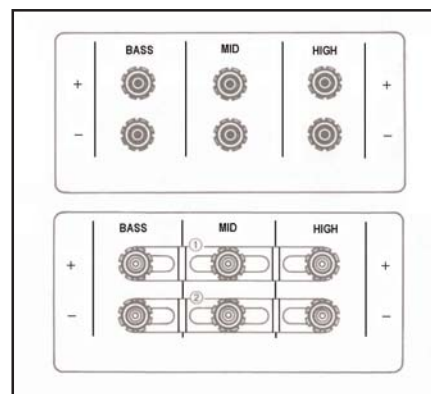


FIGURE 2A  
Tri-wiring

FIGURE 2B  
Normal  
wiring

## LOCATING THE SPEAKER FOR BEST PERFORMANCE

The location of the speakers in a room is usually dictated by space that is available and room décor. In most instances, a few changes to the room will help achieve the best sound performance. Certain basic considerations can be accommodated to achieve good results. The following information should act as a guide in placing the speakers.

Hard surfaces act as reflectors of high frequencies. Uncovered floors, window panes and mirrors can dramatically affect the distribution of higher frequencies. If you can detect reflections (loss of desired stereo effect) of higher frequencies and you suspect the floor may be the problem, placing a rug on the floor close to the speaker may solve the problem. If a window may be the cause of reflections, drapes should solve the problem.

The floor and walls act as extensions of the speaker and generally affect low frequency response. Placing the speakers in the corner of a room gives maximum bass response. Also, with the speakers on the floor, maximum response is obtained. Bringing the speakers away from the walls decreases bass.

It is obvious that some experimentation will be required to achieve sound to your liking.

In many instances adjusting the tone controls (bass-treble) will give the final desired results.

## SEPARATION

The spacing of the speakers from each other affects the stereo stage effect. The angle the speakers face also changes the separation. The best separation (stereo) results are obtained when the speakers are spaced between 8 to 10 feet apart. When adjusting the speaker for separation the listener should be centered about 6 to 8 feet in front of the speakers. Adjust the angle of the speakers until the desired stereo stage is obtained. See Fig. 3.

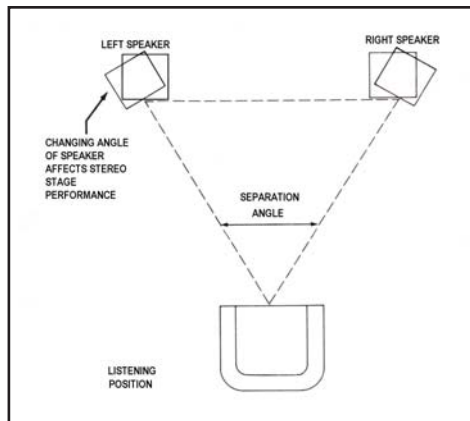


FIGURE 3

## SPEAKER OPERATION

The speakers have an efficiency (SPL) level around 85 dB. This means that low power amplifiers (25 watts per channel) will give good results. To adequately reproduce the high dynamic levels of quality recordings and CD, power audio amplifiers rated up to the power handling specifications may be necessary.

## PRECAUTION

The speakers used in Altec Lansing systems can handle large peaks of power without damage. This is achieved by special high temperature wire, adhesive and coil forms. However, damage may occur to the midrange and tweeter when these speakers are operated from amplifiers that are highly distorted. Usually some lower power handling amplifiers are easily driven into "clipping" levels. Even though the amplifiers are low power, the distorted wave forms can cause damage more so than the high power clean amplifiers.

In some room locations, speaker performance can be enhanced by raising the cabinet off the floor. Stabilizers or "feet" in varying heights are available in high fidelity outlets and raise the cabinet slightly providing smoother bass response.

## WARRANTY INFORMATION

### 30-DAY SATISFACTION GUARANTEE

If for any reason you decide that these loudspeakers do not meet your expectations, you may return them to Altec Lansing (at Altec Lansing's expense) using the original packaging material within 30 days of receipt. You retain the risk of loss until the goods are received by Altec Lansing, accordingly, you should insure the loudspeaker shipment for your benefit. For additional information and to receive a Return Merchandise Authorization (RMA), please contact Altec Lansing using the information below.

### ONE-YEAR WARRANTY ON COMPONENTS

Altec Lansing warrants to you, the original purchaser, that for one year from the date you receive these loudspeakers, these loudspeakers shall not suffer loss of functionality due to manufacturing defects in any loudspeaker component. Altec Lansing's sole obligation and your sole remedy under this one-year warranty is that Altec Lansing shall provide you, the original purchaser, with replacement loudspeakers for loudspeakers that suffer loss of functionality due to manufacturing defects within one year of the date you receive these loudspeakers. Altec Lansing shall deliver replacement loudspeakers by common carrier, and shall additionally provide you a pre-paid shipping box for returning the defective loudspeakers.

This one-year warranty does not cover cosmetic defects or cosmetic problems resulting from transportation or handling.

## IF YOU ARE HAVING TROUBLE

Your Altec Lansing loudspeakers are precision instruments, responding with high accuracy to the variations in electric current produced by other components in your system. Extraneous noise such as hum, rumble, or hissing do not originate in the loudspeakers. If you experience difficulty in realizing the fine performance built into your Altec Lansing loudspeakers, you may contact us directly.

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## WE WANT YOU LISTENING FOR A LIFETIME

Selecting fine audio equipment such as the unit you have just purchased is only the start of your musical enjoyment. Now it's time to consider how to maximize the fun and excitement your equipment offers. This manufacturer and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets sound come through loud and clear without annoying blaring or distortion – and, most importantly without affecting your sensitive hearing.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound. So what sounds "normal" can actually be loud and harmful to your hearing. Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.

### TO ESTABLISH A SAFE LEVEL

- Start your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly and without distortion.
- Once You Have Established a Comfortable Sound Level, set the dial and leave it there.

Taking a minute to do this now will help prevent hearing damage or loss in the future. After all, we want you listening for a lifetime.

Used wisely, your new sound equipment will provide a lifetime of fun and enjoyment. Since hearing damage from loud noise is often undetectable until it is too late, this manufacturer and the Electronic Industries Association's Consumer Electronics Group recommend you avoid prolonged exposure to excessive noise. This list of sound levels is included for your protection.

Decibel Level	Example
30	Quiet library, soft whispers
40	Living room, refrigerator, bedroom away from traffic
50	Light traffic, normal conversation, quiet office
60	Air conditioner at 20 feet, sewing machine
70	Vacuum cleaner, hair dryer, noisy restaurant
80	Average city traffic, garbage disposals, alarm clock at two feet
<b>The Following Noises Can Be Dangerous Under Constant Exposure</b>	
90	Subway, motorcycle, truck traffic, lawn mower
100	Garbage truck, chain saw, pneumatic drill
120	Rock band concert in front of speakers, thunderclap
140	Gunshot blast, jet plane
180	Rocket launching pad

Information courtesy of the Deafness Research Foundation

**SPECIFICATONS:**

	Model 510 S Loudspeaker 3 Way Tower Acoustic Suspension Single/Bi/Tri-wiring	Model 508 S Loudspeaker 3 Way Tower Acoustic Suspension Single wiring	Model 305 S Loudspeaker 3 Way Bass reflex system Single wiring
Drivers	Woofer: 2x10" woven carbon fiber Midrange: 2" Polyamide Titanium Tweeter: 1" Polyamide Titanium	Woofer: 2x8" woven carbon fiber Midrange: 2" Polyamide Titanium Tweeter: 1" Polyamide Titanium	Woofer: 1x10" woven carbon fiber Midrange: 2" Polyamide Titanium Tweeter: 1" Polyamide Titanium
Frequency Response	Useable (-10 dB): 20 Hz - 22 kHz ±3dB: 28 Hz – 18 kHz	Useable (-10 dB): 26 Hz - 22 kHz ±3dB: 38 Hz – 19 kHz	Useable (-10 dB): 29 Hz - 22 kHz ±3dB: 35 Hz – 18 kHz
Power Handling	300 W nominal	200 W nominal	200 W nominal
Sensitivity	84 dB	83 dB	86 dB
Nominal Impedance	6 ohms	6 ohms	8 ohms
Cabinet Finish	Handmade walnut veneer and cherry veneer	Handmade walnut veneer and cherry veneer	Handmade walnut veneer and cherry veneer
Cabinet Size	49" x 12" x 14"	41" x 11" x 11"	27" x 15" x 12"



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