LOUDSPEAKERS

Model **ECA4**

Model **ECA44**

EMP Tek

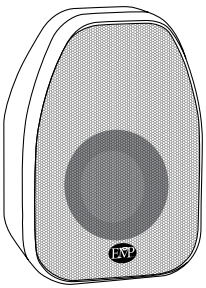
USER & INSTALLATION MANUAL

Introduction

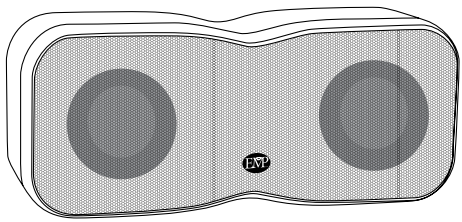
Congratulations on your purchase of an EMP Tek ECA4 or ECA44 compact theater speaker! Your speaker is the result of many years of research and development dedicated to producing powerful, high-quality home audio systems.

This manual contains setup recommendations and specifications for the ECA4 and ECA44 compact theater speakers. It is recommended you thoroughly read through the material contained in this manual before connecting your speakers. This will ensure you have an understanding of how to properly setup and operate your speakers for optimum performance.

ECA44 and ECA4 Compact Theater Speakers



ECA4 Mini Monitor Loudspeaker



ECA44 Center/LCR Loudspeaker

Break In Period

Allow several hours of listening time to adequately allow the ECA4 and ECA44 speakers to break-in. During this first 18-24 hour listening period, the driver's suspensions will loosen, resulting in an increase in low frequency response, improved definition, and increased clarity and detail.

Care and Cleaning

To maintain the speaker's high quality appearance, it is recommended to regularly use a dry or slightly-damp soft cloth to keep the exterior free from dust or dirt. To clean dust from the grille, use a vacuum with a brush attachment.

Features

At the heart of the ECA4 and ECA44 compact theater loudspeakers are proprietary aluminum cone woofers and midrange drivers. The special material combines stiffness, low mass and self-damping properties in a manner that allows virtually uncolored presentation of program material.

A powerful magnet, extended voice coil and bumped back plate give the bass/midrange drivers high excursion capability. This ensures accurate dynamic reproduction. The driver is shielded by using a steel cup and an additional magnet to cancel any stray magnetic field that may cause interference with video equipment such as CRT type televisions.

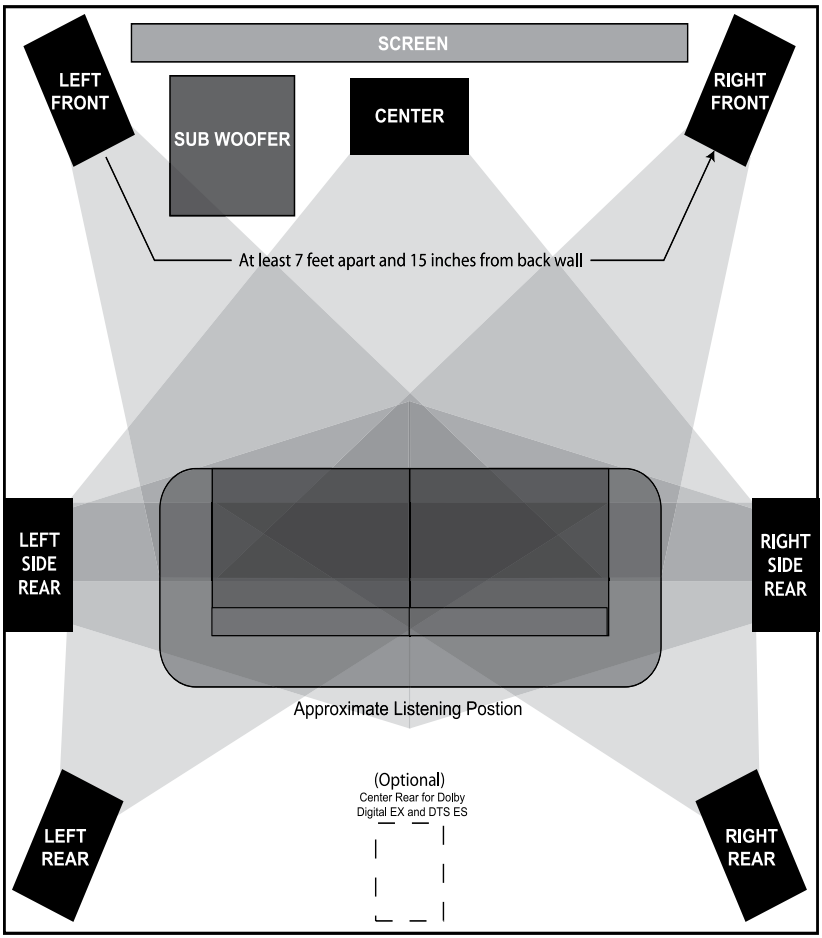
For high frequencies, a premium quality silk dome tweeter is used. This tweeter uses liquid cooling to allow greater power handling and is also magnetically shielded.

Steep acoustic slope crossovers are used to integrate drivers. The use of steep crossover slopes allows high power handling, minimizes driver interaction anomalies, and maximizes the clarity with which each driver is able to produce its respective frequency band. A polyswitch, or current limiting device, is used in the crossover to prevent damage to the tweeter if over-driven. This device is engineered to work 900% faster than a fuse.

Constructed of cast aluminum, the cabinets also have a narrow profile to minimize cabinet diffraction. The speakers practically disappear leaving only a deep, wide sound stage with pinpoint imaging. High quality binding posts ensure a good electrical contact. Sophisticated computer modeling and measurement techniques are used extensively in the EMP loudspeaker design process.

System Setup

To extract the best possible sound from your speaker system, it is important to determine where the speakers will sound best in your listening room. Room reflections from the floor, ceiling and side walls influence the balance, imaging and overall sonic quality at the listening position. Experiment with speaker placement to determine which location offers the best overall sound. As a general guide, use the room layout diagram and the following descriptions when setting up a home theater system. Some speakers shown in the diagram may not always be applicable to your individual system.



System Setup (continued)

Front Main Speakers

As a suggested starting point for the front left and right main speakers, try to place your speakers about 15 inches from the wall and 7 feet apart from each other. The distance from the listening position to each speaker should be close to the distance that separates the two main speakers (i.e. triangle). The EMP compact theater speakers can also be hung on a wall or placed in bookshelves to better match your décor. If this is how your installation will proceed, keep in mind the spacing comments above for best performance. Also, slightly angling the speakers inward towards the listening position may give a more spacious and realistic sound stage.

Center Channel Speaker

For optimal performance in surround sound applications, the center channel speaker should be placed in the center between both left and right main speakers. Often this positioning dictates placing the center channel speaker either directly above or below a television or monitor. Since both the ECA4 and ECA44 compact theater speakers are video shielded, the center speaker may be placed in close proximity to virtually any television without cause for concern. Also, the ECA44 compact theater speaker may be placed in either a horizontal (lying down) or vertical (standing) position.

Surround Channel Speakers

The surround channel speakers should be placed slightly above and behind, or to the sides of, the listening position. The optimal listening position is usually centered between the surround channel speakers. For best performance, you may want to experiment with angling the surround speakers towards or away from the listening position.

Subwoofer

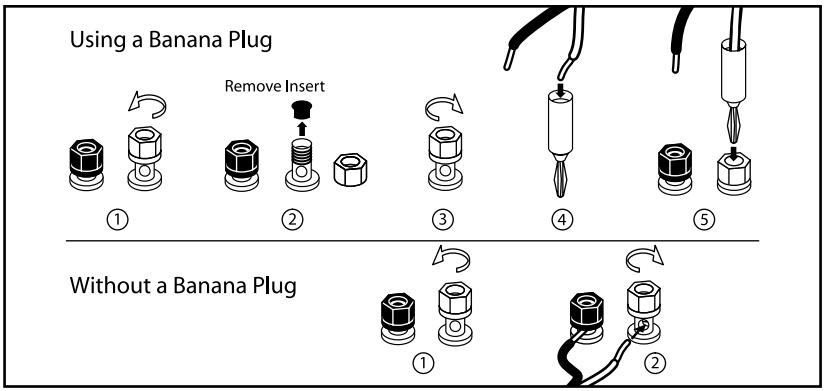
Placement of the subwoofer will largely determine the quality, quantity, and extension of the bass frequencies within your listening room. Bass frequencies are reinforced by close room boundaries. Placing the subwoofer nearer to a corner will make the subwoofer sound louder and boost the very lowest frequencies. Placing the subwoofer away from a corner or walls will provide the least reinforcement, making the bass sound subjectively thinner than if the subwoofer were closer to a wall or corner. A good starting point for subwoofer placement would be to place the subwoofer along a wall 1-3 feet from the corner. You may want to experiment with subwoofer placement and the sub-amplifier controls to achieve the proper bass balance.

NOTE: There are several different surround formats available. Dolby Pro-Logic, Pro-Logic II, Dolby Digital and DTS generally have a 5-speaker plus subwoofer setup. Dolby Digital EX and DTS ES add an additional center rear speaker. Some newer receivers also offer the use of 7 or more effects channels. Please consult your audio/video professional to determine which system is best for you and how many speakers you will require.

Attaching Speaker Wires

When using a banana plug to attach speaker wires to the binding post terminals, remove the black and red plastic protective inserts from the terminals. To do this, loosen the binding nut from the terminal by turning the nut counter-clockwise until the nut is completely removed from the terminal. Remove the plastic inserts by pulling them straight out, then replace the nut to the terminal and turn clockwise. Insert the banana plug into the hole provided in the top of the terminal, and then continue to tighten the nut until secure. Some banana plugs may be able to fit into the terminal's top hole after the nut is secure. Repeat for the other speaker wire(s) as necessary.

If not using a banana plug, simply loosen the binding nut to allow the hole in the side of the terminal to become exposed. Strip ¼-inch of the insulation from the end of the speaker wire and insert the exposed wire end into the now exposed hole in the side of the terminal. Tighten the binding nut by turning the nut clockwise until the speaker wire is secured. Repeat for the other speaker wire(s) as necessary.



Specifications

Model	ECA44	ECA4
Frequency Response:	100Hz – 20Hz ±3dB	100Hz – 20Hz ±3dB
Sensitivity:	88dB (2.83V@1m)	85dB (2.83V@1m)
Recommended Power:	50-120 Watts	50-100 Watts
Woofer:	Dual 4" Aluminum Cone	4" Aluminum Cone
Tweeter:	1" Fabric Dome	1" Fabric Dome
Impedance:	6 Ohms	8 Ohms
Crossover Frequencies:	3000 Hz	3000 Hz
Dimensions:	Height: 5" Width: 11¾" Depth: 4½"	Height: 7¼" Width: 5" Depth: 4½"
Grille:	Black or White	Black or White
Finish:	Black or White	Black or White
Weight:	8 lbs.	4 lbs.

Warranty

Engineered Music Products “EMP Tek” warrants the ECA44 and ECA4 speakers (the "Product") to be free from original manufacturing defects in materials and workmanship for five (5) years from date of purchase from an authorized EMP Tek dealer. This warranty extends only to the original consumer purchaser. EMP Tek does not warrant goods used in industrial applications. This warranty does not cover any expenses incurred in any removal or re-installation of the product.

If the product should prove defective within the warranty period, contact EMP Tek for a return authorization number prior to returning the product by prepaid delivery to EMP Tek, along with the original sales invoice or other proof of purchase, which establishes eligibility for warranty service. EMP Tek will, at its option, replace or repair the product free of charge and return the product by prepaid delivery. This warranty does not apply to any product which has been damaged, misused, altered, neglected or repaired by anyone other than an EMP Tek authorized service facility.

Any implied warranties including fitness for use and merchantability are limited in duration to the period of the express warranties set forth above, and no person is authorized to assume for EMP Tek any other liability in connection with the sale of the product. EMP Tek expressly disclaims liability for any incidental and consequential damages caused by the product or the result of failure of this product. The remedies provided under this warranty are exclusive and in lieu of all others.

This warranty gives specific legal rights. In addition, there may be other legal rights arising from the sale of the product, which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply in some areas.

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