

For all Dual 5-1/4" LCR In-Wall Loudspeakers

Congratulations! You have purchased a high quality stereo loudspeaker. When matched to comparable electronic equipment, expect years of quality high fidelity sound. We are constantly striving to provide the very best technology has to offer.

The following manual is designed to give you, the installer or owner, basic information as to the speaker's installation and operation. It is beyond the scope of this manual to go into all the details that must be taken into consideration in a sophisticated high fidelity system. When installing the wiring and speakers it is important to adhere to all local codes and regulations. Consulting a professional will help to maximize your system's performance.

If you have any questions that are not answered by this manual, contact your local dealer for assistance. For the most current information please visit: www.oemsystems.com.

GENERAL DESCRIPTION

These two-way speakers have specially designed woofers with linear long throw butyl rubber surrounds for long life and superior damping. Pivoting Dome Tweeters are utilized for excellent high frequency dispersion throughout your entire listening environment.

SHIPPING DAMAGE

Each speaker is thoroughly tested before it leaves the factory. However, in shipment, accidents may occur. Please inspect your speakers carefully when you receive them to make sure there is no damage. If there is, please notify your dealer, or supplier immediately for assistance. If you received your speakers by public transportation, report the damage at once to the shipping company.

AMPLIFIER OPERATION

These speakers will perform well with amplifiers from 5 to 125 Watts RMS. However, damage to the speakers can be done by amplifiers of nearly any power rating if the amplifier is overdriven into clipping. "Amplifier clipping" is a phrase used to describe a condition when, because of the volume demand, an amplifier is being asked for more power than it can give. Clipping causes distortion of the audio signal. If you should hear an unusual amount of distortion at high listening levels then consider reducing the volume. **DAMAGE DONE TO A SPEAKER BY CLIPPING IS NOT COVERED UNDER THE WARRANTY.**

SPEAKER PLACEMENT

Placement of In-wall Speakers should be carefully considered. Please contact a professional for assistance if you are uncomfortable with the planning or installation process.

Ideally, the speakers should be located where they will provide the best possible sound and ease of installation. It is beyond the scope of this publication to discuss all of the various aspects of speaker placement but here are some suggestions that should be helpful. For more bass, place the speakers between 18 and 36 inches from an adjacent wall as measured to the center of the speaker. Avoid placing the speakers less than 18 inches from an adjacent wall. When placing speakers near a corner, avoid locating them an equal distance from the two adjacent walls.

When used in a home theater the front left and right speakers should be separated from each other a distance of 0.8 to 1.2 times the seating distance (assuming they are on the same plane as the center speaker). For example, if the seating position is 10 feet from the viewing screen and/or center speaker then ideally the distance between the left and right speakers should be somewhere between 8 and 12 feet, (10 x 1.2ft = 12ft). MTM style speakers are best installed in portrait orientation. However, landscape is often used for the center speaker for aesthetic or clearance purposes. If the speakers are located behind an acoustically transparent screen then all the speakers should be oriented portrait style. If your model has level controls then switch the HF control to the + position. Aiming the pivoting tweeter toward the listening area will add a little brilliance by raising the amplitude of the highest frequencies (>12kHz). Aim the tweeter by pressing the lens area along side the tweeter dome.

WIRING

To achieve maximum performance from your new speakers we strongly suggest the use of good quality stereo cable. There are many good brands available. We recommend that the cable be at least 16 gauge or larger for runs of over 50 feet and that the cable be double insulated. This is often referred to as "jacketed" speaker cable. "Zip cord," which is single insulated and is often made with clear insulation, should be avoided as it is not as durable. Allow about 2½ feet (0.8m) of free cable at the speaker cut-out and sufficient length at the other end to reach the electronics. Having to add extra cable later can be tedious and time consuming.

Avoid bundling speaker cables parallel to electrical cables for extended lengths. Though the impedance is low and the likelihood of interference low, this may help reduce hum and RF interference. When securing the cable, use care not to staple or nail the electrical conductors. Doing so could result

	Overall (W x H)	Cut-Out (W x H x Depth)
A-LCRS	9" x 15-3/4"	7-7/8" x 14-7/16" x 3-1/2"
PV-LCRS	9" x 15-3/4"	7-7/8" x 14-7/16" x 3-1/2"
K-5LCR	9" x 15-3/4"	7-7/8" x 14-7/16" x 3-1/2"

For all Dual 5-1/4" In-Wall Loudspeakers

in a short that might damage the electronics.

If connecting more than two speakers to one amplifier channel we suggest that you consult a professional for assistance.

When connecting your speakers, make sure proper polarity (phasing) is maintained. Simply put, this means ensuring the same wire which is connected to the positive terminal of the amplifier has its other end connected to the positive terminal of the speaker. Note: Most manufacturers use red to designate +. If the connections on one of the speakers are reversed, (out of phase) the quality of your bass will be seriously impaired.

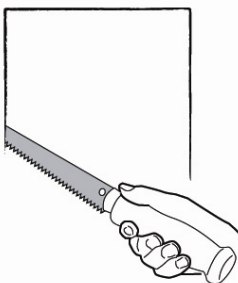
INSTALLATION

If the drywall has not yet been installed a Rough-in-Bracket (RIB-LCR) may be used to reserve the speaker location on the wall. The RIB-LCR brackets are available from the distributor or dealer where the speakers were purchased. When the brackets are used the holes are cut when the drywall is installed. The cable can be tied off on the bracket after securing the cable to a nearby joist.

If the drywall is installed and the speaker locations have not yet been established then do so now. Assess the wall for possible concealed obstructions such as wiring, plumbing, etc. Inspect the backside of the wall, the attic, and/or the crawl space if available for clues to possible obstructions. Use inspection holes with inspection tools (camera, mirror, flashlight, etc.) if absolutely necessary. Use a "stud finder" to locate the positions of the studs.

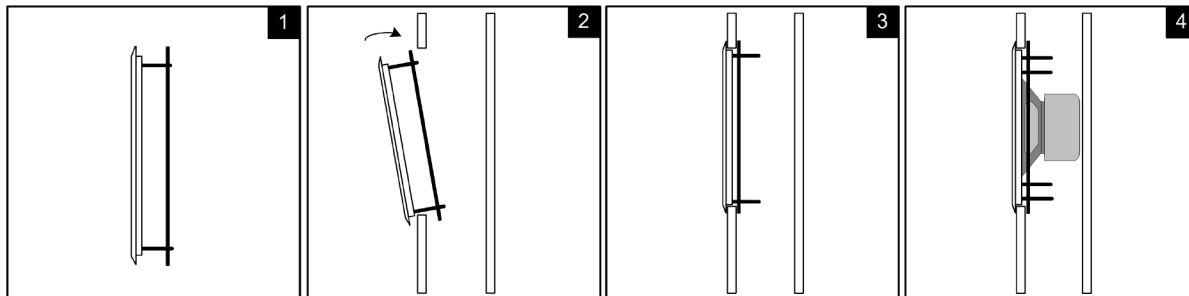
With the exception of the **PV-LCRS**, all the speakers are shipped with two different style clamp rings that allow the speaker to be installed immediately next to a stud—**items (A) & (B) below**. **The PV-LCRS is shipped with clamp ring (A) only. For the PV-LCRS we recommend that the edge of the speaker opening be at least 1/2" (13mm) away from a stud if the speaker is installed in the portrait orientation.**

Once the speaker locations are established use the paper template (the outside of the outer cardboard rectangle) to mark the speaker cut-out. The dimensions for the cut-out are listed in the chart on the previous page. Using the proper tool, cut the appropriate sized hole in the wall. On drywall, clean cuts can be made with a drywall saw.



If the cable has not yet been run, do so now that you have access to the wall's interior.

To aid in speaker performance, a fibrous material, such as



fiberglass or polyester fiber, may be placed behind the speaker. This may also help to reduce unwanted sound from being transmitted into adjoining rooms. If the wall space has blown or loose insulation, it is important to prevent the insulation from entering the back of the speaker. This can be accomplished by placing a batt of fiberglass insulation over the back of the speaker.

As the diagrams show, the speakers utilize a metal mounting ring which, after tightening with the screws provided, acts as a clamp to hold the speakers in place.

Install the frame and mounting ring assembly by passing the black mounting ring through the cut-out as illustrated in **figures 1 & 2**. The white frame should fit cleanly, without interference, in the cut-out hole. If the hole is a little small then trim the hole as needed. Lightly tighten the screws to secure the clamp ring against back of the wall. (**see fig. 3**) Use care not to over-tighten the screws or the frame will become distorted and make it difficult to install the grille.

Pull the end of the cable out of the wall, strip back a section of the jacket as needed, and then expose 1/2" (13mm) of each conductor. Connect the wire to the terminals on the back of the speaker assembly, observing polarity (+ & -).

Insert the speaker into the frame and install the eight screws. Tighten the screws beginning with the four inner screws followed by the four outer. (**see fig. 4**) Use care not to over-tighten the screws or it may later become difficult to install the grille. Install the grilles after testing the operation of the speakers. The grilles are installed by gently working the edge of the grille into the frame of the speaker, beginning at one corner and working one or both directions around to an adjacent or opposite corner.

If the speaker frames are to be painted after installation, either remove the speaker baffle assembly or use the paint-mask (the inner cardboard rectangle) to cover the speakers to prevent damage. **DO NOT PAINT THE GRILLE AND FRAME ASSEMBLY TOGETHER.** The grille should be painted separately. Use thin coats and thin the paint as necessary to avoid clogging the perforations with excessive paint.

