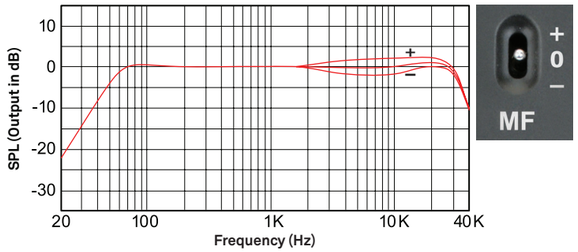
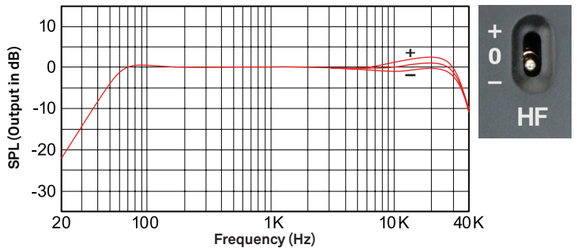
CONTROL ADJUSTMENT

There are 2 switches located on the front baffle, labeled MF and HF, (Mid-Frequency and High-Frequency, respectively). Each switch has 3 positions that allow the user to tailor the sound of the speaker for different room acoustics, mounting locations, and personal preference. These controls are also useful when using the speakers behind acoustically transparent video screens (where some augmentation of the upper frequencies may be necessary) or when customizing the speakers for unique surround applications where the sound may be either focused directly at the seating area or reflected off nearby surfaces. The diagrams below show an approximation of how each control affects the frequency response. Moving the switches up (Toward +) increases the output.

The Mid-Frequency (MF) control allows for a relaxed, neutral, or forward midrange presence.



The High-Frequency (HF) control affects the uppermost audible range to create soft, neutral, or articulate detail.

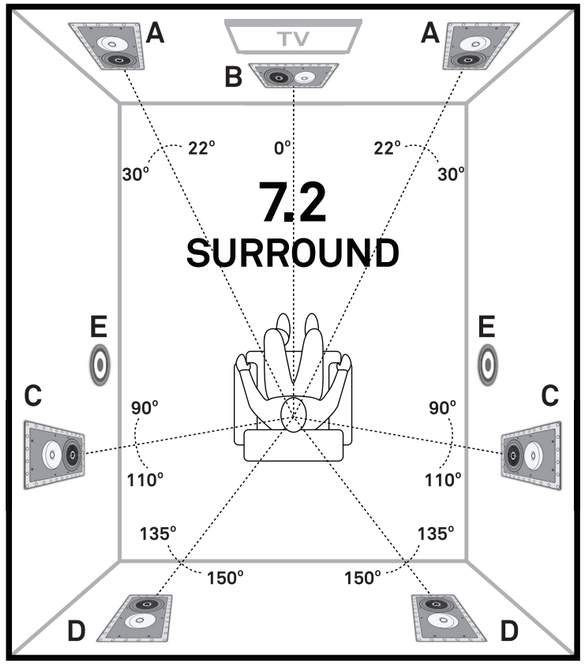


PAINTING THE GRILLE

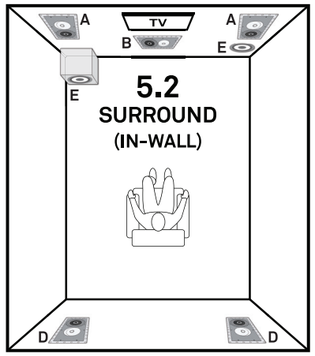
The grilles can be painted using multiple light coats of spray paint. Custom color spray paints are available from specialty companies. Contact your dealer for more information. The grilles should be removed from the speaker and painted in a clean environment to prevent contamination. It is best to go around the grilles and apply the paint from multiple angles. DO NOT remove the scrim cloth from the backside of the grille. It is not replaceable.

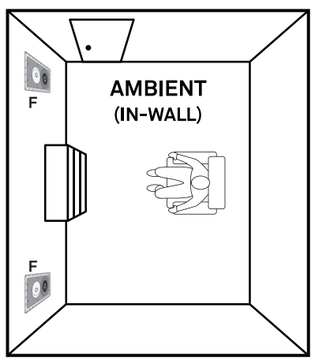
Attach the grilles to the speakers and enjoy. Should you wish to remove the grilles from the speakers pull at the grilles' edge. Initially there will be significant resistance because the grilles are magnetically attached.

SUGGESTED SPEAKER LAYOUT OPTIONS



A - Front Channel
B - Center Channel
C - Side Channel
D - Rear Channel
E - Subwoofer
F - 2 Channel Ambient





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INSTALLATION GUIDE

Frameless In-Wall LCR Loudspeaker

In-Wall model		Overall	Cut-Out (Round x Depth)
K-W6LCRSd	6-1/2" In-Wall LCR Loudspeaker with Rotating Waveguide	9" x 15-3/4"	7-15/16" x 14-7/16" x 3-1/2"

Congratulations! You have purchased a high quality stereo loudspeaker. When matched to comparable electronic equipment, expect years of quality high fidelity sound. Our belief is that music matters and we are focused on delivering superlative music reproduction everywhere in your home.

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.preference-audio.com.

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.

HOW IS THIS SPEAKER DIFFERENT?

This speaker was designed and engineered to provide the finest performance achievable in a compact package. The custom waveguide is unique in the industry and provides cross-axis performance that gives every listener in the room a sense of envelopment unmatched by other speakers in this category. By focusing the sound field across the listening space, the listener experiences a more balanced and symmetric sound level, especially when the main speakers are spaced more closely than is ideal, (common in many of today's home theaters).

The waveguide also increases the efficiency of the tweeter, allowing it to operate with far less input power and significantly lowering the distortion. This also allows for the elimination of the ferro-fluid used for heat dissipation, improving elements of the tweeter's performance including part-to-part consistency. This same waveguide also allows the tweeter to operate a full octave lower than conventional dome tweeters while simultaneously reaching more than a half octave higher in frequency. This allows the tweeter to cover more of the critical voice range.

K-W6LCRSd

But we're not done yet. This same cross-axis tweeter design creates a much smoother off-axis listening experience, eliminating the midrange-hole that is commonly experienced with conventional designs. Additionally, by controlling the directivity of the sound field, the early reflections that occur from nearby walls and furniture are reduced so that more of the direct sound from the speakers are heard, improving the intelligibility and detail of the original sound source.

Finally, the inset tweeter produces a time aligned position and excellent phase coherency with the woofer, improving the off-axis performance, both in the vertical and horizontal directions.

WOOFER

While the tweeter has allowed us to create a truly unique speaker, the woofer's complement of components provides the balance of performance. Every detail of the woofer was considered using a "Design of Experiments" methodology:

- Cast aluminum basket with its stiff but inert structure
- Super-light extra-long copper-clad aluminum voice coil
- Low eddy-loss mechanically damped Kapton former
- Lightweight curved woven cone made from genuine Dupont Kevlar®
- Linear-transitioning butyl rubber surround
- Vibration damping silica rubber motor boot
- High compliance flat spider
- Machined aluminum heat-dissipating phase plug

Clearly, care was exercised to create a woofer that behaves as well off-axis as it does on-axis and meets the tweeter's top caliber performance.

CROSSOVER

Of course all of this performance is brought together using a sophisticated multi-order crossover that seamlessly blends the drivers for performance that rivals and exceeds everything in its class. The crossover contains two level controls to tailor the speaker for the application.

SOME OF THE WAYS THIS SPEAKER CAN BE USED

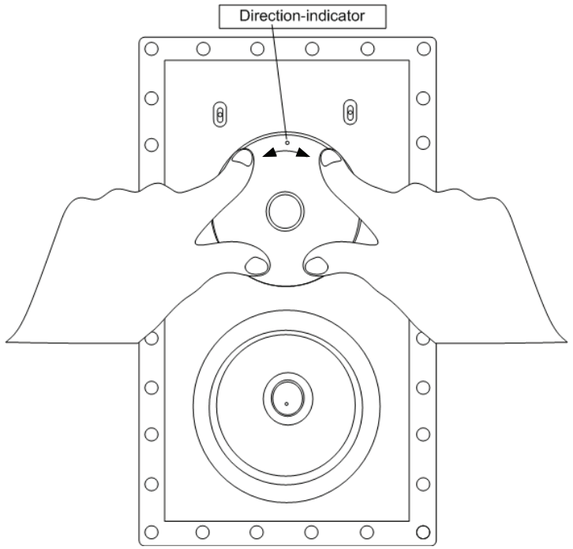
This speaker can be used for 2-channel High Resolution audio or for nearly any speaker location within a home theater system. The chart to the right provides suggested tweeter orientations for a number of common speaker locations within a home theater. We encourage you to experiment with the tweeter orientation to see what works best within your system, especially with surround placements.

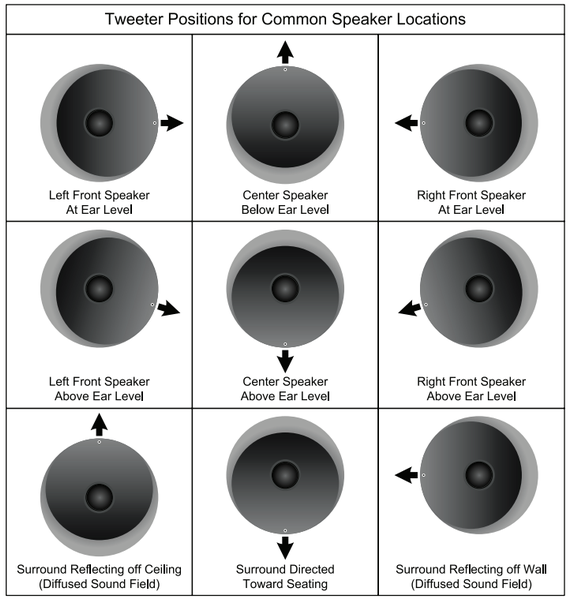
While it may seem unconventional to use this speaker in the Landscape orientation for the center dialog speaker, it is actually well suited because of the excellent phase coherency between the tweeter and woofer. The speaker actually outperforms most of MTM (Mid-Tweeter-Mid) designs that have become commonplace for the center dialog channel.

ROTATING THE TWEETER

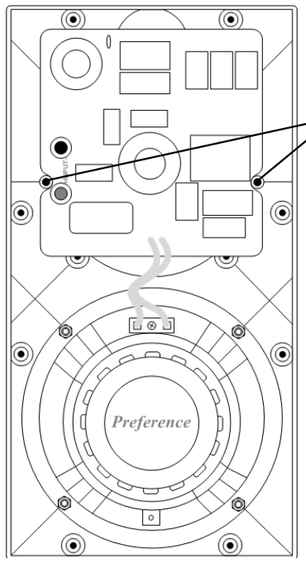
- The tweeter should be rotated into the desired position for optimal performance.
- There are detents every 15 degrees. The tweeter will lock into these detents when positioned over them.
- Press firmly at the edge of the tweeter waveguide using 4 fingers.
- A gap of about 2mm will appear at the edge when depressed.
- Rotate the tweeter into the desired position, releasing when you feel a detent.

- NOTE: It may be necessary to moisten one's fingers to achieve good traction on the waveguide.
- The detents will not be felt when the waveguide is fully depressed. Decrease pressure to locate the detents.





LOCKING THE TWEETER INTO PLACE



Optional Security Hole
Two holes have been provided to lock the tweeter into place and prevent rotation. Should it be desirable to lock the tweeter, install two #6x3/8" (3.5mm X 10mm) sheet metal screws with flat washers in the provided holes. (Hardware not included)

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 helpful suggestions.

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 then 18 inches from an adjacent wall. When placing speakers near a corner, avoid locating them an equal distance from the two adjacent srfaces.

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). If the speakers are located behind an acoustically transparent screen then all the speakers should be oriented portrait style. The tweeter should be aimed toward the listening area.

WIRING

To achieve maximum performance we recommend that the speaker cable be at least 16 gauge or larger for runs over 50 feet (15m) and that the cable be double insulated. A CL-2 or CL-3 rated cable may be required. Check local codes. “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 through the electrical conductors. Doing so could result in a short that might damage the electronics.

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. It is important to check this on all speakers. If the connections on one of the speakers are reversed, (out of phase) the sound quality will be 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 these 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.

The K-W6LCRSd is shipped with a Clamp Ring for clamping the speaker to the wall. The edge of the speaker opening must 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 cardboard template (the outside of the inner 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.

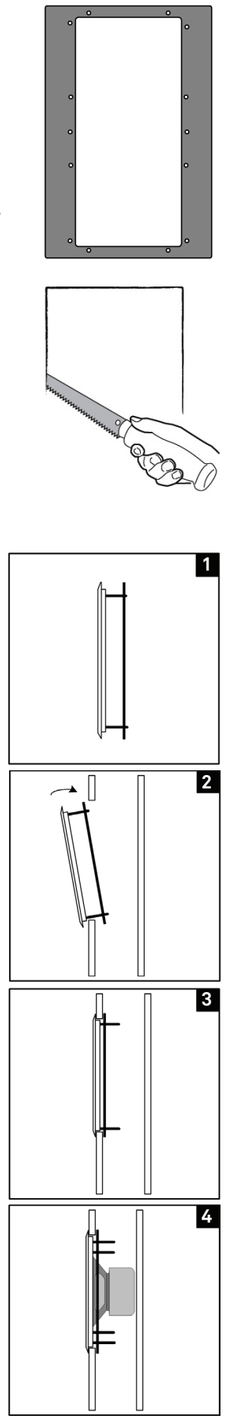
If the cable has not yet been run, do so now that you have access to the wall’s interior.

To aid in speaker performance, a fibrous material, such as fiberglass, 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, care must be taken to prevent the loose 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.

Install the frame and retro ring assembly by passing the metal retro ring through the cut-out as illustrated in **figures 1 & 2 to the right.** The 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 retro ring against the back of the wall **(see fig. 3).** Use care not to over-tighten the screws or the frame may become distorted. **Note: Use only the 4 outer holes for mounting the frame.**

Pull the end of the cable out of the wall, strip back a section of the jacket as needed, and then expose ½" (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 **(see fig. 4).**



Speaker Installation As Viewed from Above