



User Manual - B23 Series - In-Wall Theater Speaker

Description:

The idea behind the new B23 speaker line was to build a truly high performance loudspeaker that could be retrofit in a wall. The B23 not only has a stunning look, but also has stellar performance.

In order to produce a Tru high fidelity full range speaker, a three way design was selected. A three way design allows the use of the proper size component for each band of frequencies for playback.

At the high end of the frequency spectrum, a Titanium diaphragm tweeter was selected for a Tru-to-life dispersion pattern that most closely resembles the way natural sound moves. This tweeter material allows the tweeters to be played at the proper level, without the listener experiencing ear fatigue. This is especially important for the high volumes at which home theater playback often occurs. Also, the tweeter's neodymium motor was selected because it allows the tweeter to be compact enough to be in a swivel mount. This allows the installer to place the speaker where it would go in a real world application, but also aim the tweeters so that the listener experiences them on axis where their response is best.

A 6.5" carbon fiber midrange was selected because of its balance of the many factors that must be considered when choosing a midrange driver. This single piece cone has good dispersion in the usable band. Also, the cone size was important in considering cone breakup, which is a form of distortion that occurs at lower frequencies in larger

cones. The woven carbon fiber cone material was chosen because it is very stiff, limiting cone breakup in the usable band. It is also very light, which helps reduce the weight of the moving assembly. By balancing these qualities, a midrange speaker was produced with good dispersion in the usable band with very little breakup, and is sensitive enough to have incredible dynamic range and accuracy.

Because this is a three-way in-wall speaker, the limited depth would not allow the use of a conventional woofer driver. The solution was to use three 6.5" woofers instead of a single 10" woofer. This would give the necessary output to balance with the rest of the system, while playing low enough to be truly full range, all while maintaining a depth that still fits in a standard 2 x 4 wall.

This high performance full-range loudspeaker needs the retrofit able back box in order to control the amount of air the speaker operates in, sold with the speaker. The midrange speaker has its own enclosure integrated with in the speaker to optimize its performance and control its resonance. The B23 cabinet is designed to allow the woofers the exact amount of air space they need to balance their output perfectly.

It is very difficult to get true full-range, high quality sound out of a speaker that fits in a standard wall. This is a problem the industry has been struggling with for years. The B23 series has accomplished this: Tru high fidelity in the wall.

Unpacking and Inspection:

These B23 loudspeakers are packaged extremely well to ensure no damage occurs during shipping. Carefully open the box and remove the speaker. Inspect it immediately for any kind of damage. The speaker should have left our warehouse in perfect condition, so any damage must be reported to your dealer or to TruAudio right away. Please contact us immediately at 1.888.858.1555

All service to this product MUST be done by a TruAudio authorized repair center. If you try to do any kind of repair, this will void the warranty!

We recommend that you retain the packaging in case a need arises for you to transport your loudspeakers.

Home Theater Use:

Today's Home Theater systems require six or more speakers for true, life like Home Cinema listening. These speakers are: the front right and left, the center channel, the right and left surround (rear), and a subwoofer. Some systems also require additional surround speakers or rear centers to enhance the theater sound. The placement for these speakers is critical to having your home theater experience the best it can be.

Before Installation:

In order for these speakers to perform to their potential, we recommend that the amplifier or receiver must have the proper amount of power output. For the B23-465 we suggest using 5-350 watts and for the B23-265 & 265SURwe suggest using 5 to 220 watts.

These speakers require two conductor speaker cable when connecting to the amplifier/receiver. For most applications,

we suggest using a good quality, high strand 14 gauge. For longer runs over 75 feet, we suggest using a 12 gauge speaker cable.

If the speaker cable will be run inside the wall or ceiling, make sure the speaker cable is UL certified and is in accordance with all your local building regulations.

Determining Speaker Placement:

When properly installed and with appropriate equipment, the TruAudio B23 series will provide an unforgettable experience. B23 speakers are capable of delivering precise imaging and unmatched sound quality. To maximize the performance of your system, please take time to read instructions for proper setup and installation.

Pre-installation is critical to achieving the maximum performance from your TruAudio B23 speakers. Factors such as the location and height of seating and location of the video monitor will dictate the proper placement of speakers.

Remember that the wall is part of the sound reproduction system. The listening room should be symmetrical both in overall shape, and with respect to furnishing. The best listening rooms exhibit low intrusion of ambient noise. The Bad Boys should not be mounted with less than two feet of unobstructed wall on either side.

Optimum horizontal placement of left and right speakers is six to ten feet apart and at least 18" from the side walls. See figure #1

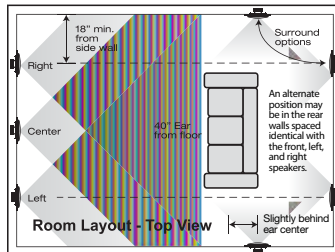


Fig #1



Fig #2



Fig #3

Preparation before Speaker Installation

Use the back side of the backbox or the cutout template and mark on the wall where you would like to install your speaker, cut the drywall out. See figure #2

Back Box installation:

The B23 speakers MUST USE the back boxes provided by with the speakers. The back boxes provide better definition to bass, higher power handling, and less intrusion of sound into other rooms.

- All B23's back boxes will fit into a 2" x 4" stud bay.
- Avoid placing a speaker in a stud bay shared with electrical wires.
- Be sure to attach speaker cable to back box. **Note: Be careful not to over cut sheetrock around the opening. There is about ½" of play.**

Connect your speaker cable to the terminals on the outside of the backbox. See figure #3

How you are ready to install the back box into the cutout in the drywall using the dogears. Place the backbox into the hole and tighten all the dogears securely, but don't over tighten. See Figure #4

Note: If your cutout is right up against a wood stud you can put a wood screw through the backbox and into the stud. See figure #5



Fig #4



Fig #5

Speaker Installation

These speakers are mono so you will need two speakers for stereo sound, one for the right channel and one for the left. There should be a two conductor speaker cable pre-wire to each of the speaker locations.

Remove the speaker from the box and inspect for any damage.

Very important, DO NOT remove the plastic covering over the aluminum face of the speaker until the speaker is full installed.

If there is any damage, contact TruAudio immediately, 888-858-1555.

Connect the twisted speaker cable that is inside the backbox to the speaker terminals on the back of the speaker. Push down each post and insert the speaker cable. The posts will be located on the back of the speaker on the crossover. Make sure that only BARE wire is touching the speaker post once it slides back into place. All TruAudio products feature gold push binding posts which are quick and simple to use and also are great for conducting speaker signal.

Caution: Make sure to observe polarity, R + (positive) from the amp or volume control to speaker R

+ and R - (negative) to

R -. Make sure to do the same for the left channel.

When connecting the other end of the speaker cable to the amplifier or receiver make sure to observe the same polarity as you did at the speaker connection.

1. Make sure the midrange driver is on top for the left and right speakers. This driver will have its own enclosure around it on the speaker.

2. Carefully lift the speaker into the backbox.

3. Use the machine screws provided by TruAudio to securely attach the speaker to the back box. See figure #6

4. Then simply line up the magnets on the grill to the screw heads on the Bad Boy and the grill will attach itself.



Fig #6

NOMENCLATURE

Model:	B23-465LCR	B23-265LCR	B23-265SUR
Type:	In Wall 3-Way	In Wall 2-Way	Dipole/Bipole SUR
Woofer:	(3) 6.5" Coated Single Piece Carbon Fiber	Dual 6.5" Coated Single Piece Carbon Fiber	Dual 6.5" Coated Single Piece Carbon Fiber
Midrange:	6.5" Coated Single Piece Carbon Fiber	NA	NA
Tweeter:	1" Titanium Diaphragm Swivel	1" Titanium Diaphragm Swivel	Dual 1" Titanium Diaphragm
Power:	350 Watts	220 Watts	220 Watts
Impedance:	4 Ohms	4 Ohms	4 Ohms
Freq Resp:	39 - 20kHz	45 - 20kHz	45 - 20kHz
Sensitivity:	92 dB	91 dB	90 dB
Grill Mat:	Cloth MDF	Cloth MDF	Cloth MDF
Finish Dims:	40 5/8" (1032MM) H, 13 7/16" (342MM) W, 4 3/16" (106MM) D	25 1/4" (642MM) H, 13 7/16" (342MM) W, 4 3/16" (106MM) D	25 1/4" (642MM) H, 13 7/16" (342MM) W, 4 3/16" (106MM) D
Cutout Dims:	39 5/8" (1006MM) H, 12 7/16" (316MM) W	24 1/4" (616MM) H, 12 7/16" (316MM) W	24 1/4" (616MM) H, 12 7/16" (316MM) W

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PRODUCT WARRANTY

All in-wall, in-ceiling, outdoor speakers, volume controls and freestanding loudspeakers have a limited lifetime warranty. This warranty includes lifetime parts and repair labor on all components. Powered subwoofers and active electronics have a one (1) year limited warranty. This warranty includes one (1) year parts and repair labor on all components. TRUAUDIO's obligation under these warranties is limited to repairing or replacing any component found defective in material or workmanship under normal conditions of use. These warranties shall not apply to products which have been abused, modified, disassembled, or repaired by anyone other than TRUAUDIO or one of its appointed service centers. Products to be repaired under this warranty must be returned to the factory or designated service center with all transportation and insurance charges pre-paid.

It is the policy of TRUAUDIO to continuously incorporate improvements into our products. All specifications are subject to change without notice. If you have any questions regarding this or any other TRUAUDIO products, please call 1-888-858-1555, Monday – Friday, 7:00 am – 6:00 pm MST.

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