Owners Manual For The

Silhouette Center

Loudspeaker System

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Owners Record

Thank you for selecting a Legacy Loudspeaker System. These handcrafted instruments will provide you with many years of listening enjoyment.

The serial number is located on the rear of the unit. Record this number in the space provided below. Refer to this when calling your dealer regarding this product.

Model: Silhouette Center
Serial No: _____
Date of purchase: _____

Register your product at www.legacyaudio.com/register

Share your Legacy speakers with the Legacy community. Post your Legacy experience and system photos at facebook.com/LegacyAudio
Like the page to continue receiving the latest Legacy announcements.

The Cabinetry / Our Commitment

Handcrafted
Beneath the surface of Silhouette Center's elegant exterior lies rigid MDF construction. Interlocking joinery maximizes the strength of the cabinet parts.

Each cabinet is impeccably finished on all exposed surfaces with select veneers. The exquisite finish is hand-rubbed several times to assure a patina at home with the most elegant decor.

Our Commitment
A great deal of forethought, love and satisfaction is instilled in each piece of Legacy workmanship. We take pride in getting to know many of our customers on a first name basis.

Your purchase of this product is backed by the renowned "Legacy Satisfaction Guarantee".

Warranty

Legacy Audio supports its customers and products with pride. We cheerfully warrant our loudspeaker products we manufacture from defects in materials and workmanship for a period of seven (7) years. Electronic components such as internal amplifiers and digital processors are covered for three (3)years. Please register your product with Legacy Audio. Should you require service Legacy will require a proof of purchase in order to honor the warranty - so please keep your receipt.

- The warranty applies to the original owner and is not transferable.
- The warranty applies to products purchased from an "Authorized Legacy Dealer".
- The warranty on active components such as digital processors or internal amplifiers is limited to three (3) years of coverage.
- The warranty on dealer stock will extend for a maximum of two years from invoice.

The warranty does not cover transportation costs of product to or from the customer, distributor or dealer, or related shipping damage.

Exclusions from Warranty

The following situations or conditions are not covered by the Legacy Audio warranty:

- Accidental damage, electrical abuse or associated equipment failure.
- Use inconsistent with recommended operating instructions and specifications
- Damage caused by modification or unauthorized service
- Costs associated with the removal and reinstallation of defective products. Consequential damage to other products.
- Normal wear such as fading of finishes due to sunlight.

Speaker Installation

Select the wall location for the Silhouette Center system. Recommended mounting height for the Silhouette Center is either directly beneath or above the television.

Precautions

If you have any doubts about your ability to properly install in/on-wall loudspeakers, you should consider the services of a custom installer. If you plan to install them yourself, always use high quality tools to save time and make the installation go more smoothly. Determine the final location of the left, right and center speakers before drilling or cutting any holes. Look for pipes, wiring or any other conflicting material that might be damaged before beginning the installation.

Silhouette Center Rear

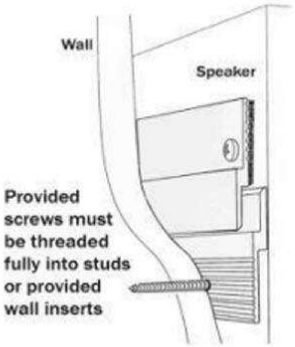
The Silhouette Center is provided with two pre-installed solid aluminum wall brackets.

Silhouette Center On Wall Installation

Locate the desired height for the top of the rear portion of the speaker with the lower edge of a piece of masking tape. Now measure downward 1". This is the height that the provided bracket will need to have the two mounting screws installed.

Use a level to set the bracket position and mark all four hole locations onto the wall. The grooves in the bracket should be against the wall and oriented down as illustrated below. If the hole locations do not coincide with wall studs, use the included plastic wall inserts. These threaded inserts do not tear out as a molybolt or expanded inserts can. Screw the inserts into the drywall until flush (do not strip by overtightening). Now attach the brackets with the provided screws.

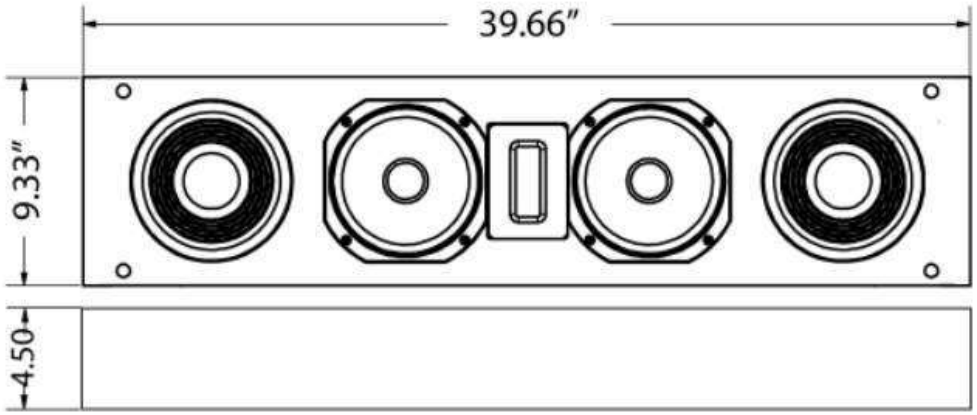
When sliding the Silhouette Center onto the wall bracket, start with the top of the speaker an inch or two above your tape mark, pressed gently against the wall and lower down slowly. Do not let go of the speakers until you are certain it is fully locked into the wall bracket.



Silhouette Center Pro On-Wall Installation

As with the Left & Right Silhouettes, the Legacy Silhouette Center can be ordered without top & bottom caps or side extrusions for on-wall installations.

Mounting instructions remain the same as on the previous page.

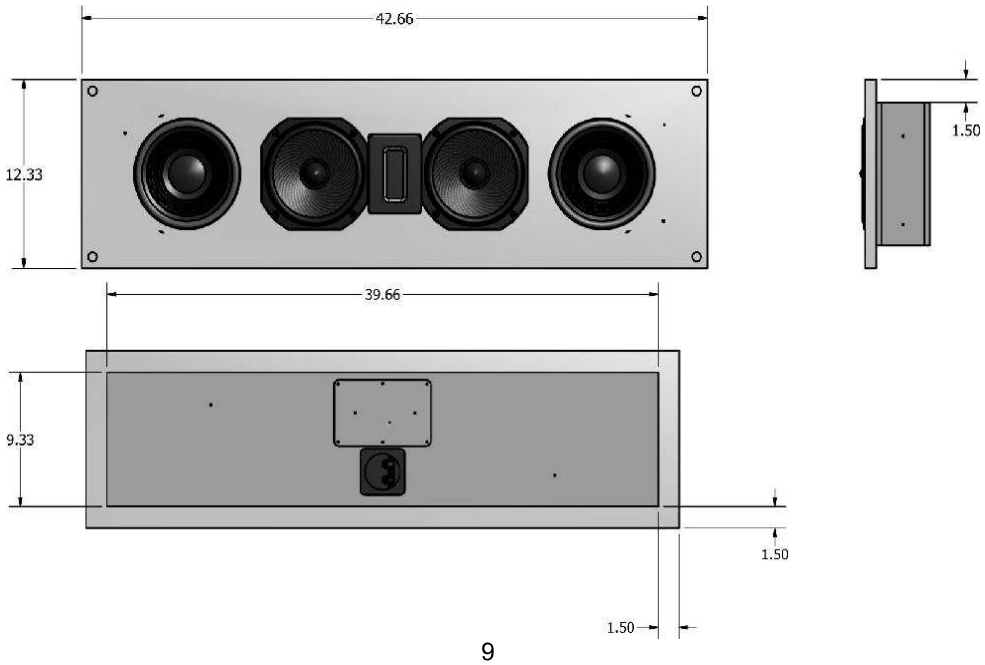


Silhouette Center Pro In-Wall Installation

The Silhouette Center Pro can be ordered with an oversized outer baffle to allow for in-wall installation. The outer baffle is 42.66" wide and 12.33" high. Four mounting screws are to be installed through the center of the grille cups into the wall framing.

Care should be taken to avoid electrical or plumbing before cutting into wall or installing screws into studs.

The wall opening should be slightly larger than the cabinet body shown.



Hooking Up Cables

The ideal conductor would have negligible resistance, inductance and capacitance. The table below shows how a few actual speaker cables measure up.

Cable	Ωs/ft	pF/ft	µH/ft
12 ga.	0.0033	24	0.21
14 ga.	0.0048	17	0.13
16 ga.	0.0079	16	0.18
18 ga.	0.0128	28	0.21

Capacitance is considered insignificant in each cable because its effect is well out of the audio bandwidth; inductance can be decreased (at the expense of increased capacitance) by keeping the conductor pair closely spaced.

How long would a cable have to be before inductance effects would impinge on the audio spectrum? Approximately 300 feet of 12 gauge would be required to establish a corner frequency of 20 kHz with an 8 Ohm loudspeaker. As you see, inductance is not a problem for most of us.

Hooking Up Cables

What about phase shift due to frequency dependent travel times down the speaker cable? Measurements show that 100 Hz waves will be delayed about 20 billionths of a second behind 10 kHz waves when traveling to the end of a 10 foot speaker cable. Since the cilia of the ear requires 25,000 times longer than this just to transmit phase information, phase shifting is obviously not the primary concern when considering speaker cables.

What about resistance? Finally we are getting somewhere. Resistance is the controlling factor of the amplifier/loudspeaker interface. Excessive resistance can cause major shifts of speaker crossover frequencies. The lower the impedance of the loudspeaker, the greater the effects of series resistance. A 20 foot run of 18 gauge cable can cause up to 10% deviations of crossover center frequencies. That same 20 feet can un-damp your damping factor and reduce your systems' output by one half decibel.

In summary, there are no perfect cables. The best way to approximate the ideal would be to keep loudspeaker leads as short as is practical.

Amplification

Ideally the loudspeaker would be among the first components selected when assembling a playback system. This would allow the user to choose an amplifier capable of delivering adequate amounts of current into the frequency dependent load presented by the loudspeaker. However, when upgrading a system, audiophiles may find themselves matching their new loudspeakers to their existing amplification. For this reason, extensive measures have been taken to ensure that each Legacy speaker system represents a smooth, non-reactive load to virtually any amplifier.

Often there is much confusion regarding amplification and loudness levels. It should be understood that the role of the amplifier goes beyond that of driving loudspeakers to a given sound pressure level. The amplifier should be able to CONTROL the loudspeakers across the entire music spectrum. This means that parameters such as damping factor (values greater than 60 are acceptable) and dynamic headroom should not be overlooked when comparing amplifiers.

Amplification

How much power will your new speakers need? That ultimately depends on your listening environment and musical tastes. As little as five watts per channel should drive them to a level satisfactory for background music. A typical 45 watt per channel receiver may fill a room with the compressed mid-band energy of "heavy metal," but seem to lack weight or control with classical recordings. Some audiophiles feel that 200 watts per channel is the bare minimum to avoid audible clipping distortion when reproducing music at "live" playback levels. Your Legacy speakers are designed to take advantage of "high-powered" amplifiers, so don't be afraid to put them through their paces.

How much is too much power? Rarely is a drive unit damaged by large doses of music power. More often than not the villain is amplifier clipping distortion. Even through decades of refinement, loudspeakers are still notoriously inefficient transducers, requiring huge amounts of power to recreate the impact of the live performance. Typically less that 1% of electrical power is converted into acoustic output. (For example, an omnidirectional transducer with an anechoic sensitivity of 90 dB @ 1w/1m has a full space efficiency of only 0.63%)

Amplification

When an amplifier is unable to fulfill your loudspeakers demands, a damaging harmonic spike may be leaked to the high frequency drivers.

Another important point regarding loudness is that the dB scale is a logarithmic one. This means that a 150 Watt amplifier will potentially sound only twice as loud as a 15 Watt amplifier. If all of this discussion of power and loudness seems a bit abstract, consider the example below.

The average acoustical power developed by a person speaking in a conversational tone corresponds to a mere 0.00001 Watts. The power that would be developed by the entire population of the city of New York speaking at once would barely illuminate a single 100 Watt light bulb.

Speaker Connections

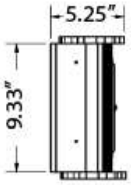
The Terminal Plate

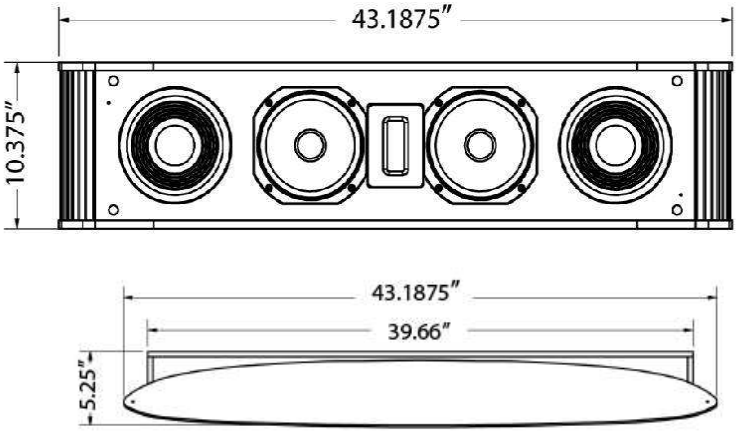
At the rear of your Silhouette Center loudspeaker you will find a terminal plate housing one pair of binding posts.

Hook the high level speaker inputs from the main amplifier to the pair of binding post. Be sure that you observe polarity when making the connections. The positive (+) terminal of the amplifier should be connected to the positive terminal of the loudspeaker. The negative (-) terminal of the amplifier should be connected to the negative terminal of the loudspeaker.

Specifications

Application:	Low-profile wide range center
System Type:	3 driver, 2 way
Tweeter:	4" AMT folded ribbon
Midwoofer:	(2) 7" Silver/Graphite woven diaphragm, cast basket, phase compensation plug
Low Freq. Alignment:	B6 Assisted with (2) 8" mass loaded radiators
Freq. Response:	55-28kHz
Impedance:	4 Ohm
Sensitivity:	92 dB (Room dB@2.83V)
Recommended Amp:	15-250w
Crossover:	2.5kHz
Inputs:	1 pair binding post, recessed cup
Cabinet Size (HxWxD)	10.375" x 43.1875" x 5.25"
Weight:	56 lbs





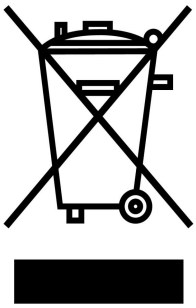
CE Declaration of Conformity

Legacy Audio
3023 E. Sangamon Ave.
Springfield, IL 62702 USA
800-283-4644
States that this product is in conformity with the essential requirements and other relevant provisions of:
Low Voltage Directive 2006/95/EC
EMC Directive 2004/108/EC

CE

All information contained in this manual is accurate to the best of our knowledge at the time of publication. In keeping with our policy of ongoing product improvement, we reserve the right to make changes to the design and features of our products without prior notice.

WEEE Compliance



Product Disposal -
Certain international, national and/or local laws and/or regulations may apply regarding the disposal of this product. For further detailed information, please contact the retailer where you purchased this product or the Legacy Audio Distributor in your country. A listing of Legacy Audio Distributors can be found on the Legacy Audio website www.legacyaudio.com or by contacting Legacy Audio at: 3023 E. Sangamon Ave., Springfield, IL 62702, USA—Phone: +1 217 544-3178.

Notes:

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