

# WS Series Ceiling Speaker User's Installation Guide

## Low Profile, In-Wall, Coaxial, Infinite Baffle Loudspeaker with Easy Install Grille

The easy to install WS series speakers are a full range In-Wall loudspeaker that incorporates high tech woofer materials with a butyl rubber surround and a state-of-the-art pivoting dome Ferrofluid cooled tweeter. The pivoting tweeter allows for deeper penetration into the room and concentrated sound to the sweet spot.

This revolutionary combination provides superior and more natural sound for both foreground and background applications.

This design is a great choice for stereo and surround sound applications. Our LCR series is a more accurate choice for 3-D audio

For efficiency and consistency the WS series speakers are timbre matched to the FIT series, LCR and CS series of speakers.

In addition, most of the WS speakers incorporate a 3 position equalization switch, one each for bass and treble to fine tune the acoustics and allow for various room surfaces.

The speaker grille color is white, and is a close match to Frazee White Shadow 181. It can be painted to match any décor. The speaker enclosure is a durable UV-resistant material that allows for both indoor and outdoor installations. Unlike other grilles that use magnets to hold them on they must be made of steel that will rust. The perforated powder-coated aluminum alloy grill is long-lasting, corrosion resistant and rust-free.

Six built-in expanding transverse dog leg clamps permit installation with or without pre-wire construction brackets in drywall or material with thickness of 7/32" to 1 3/16".

Electrical connection, up to 12 gauge wire, is made by two gold plated constant tension spring-loaded terminals.

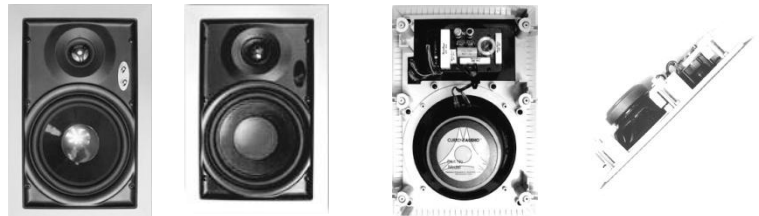
With our limited Lifetime warranty you are assured years of superior trouble free operation.



WS804

SPECIFICATIONS for WS65 Series	WS650	WS651	WSS654
Driver with Butyl Rubber Surround	MetaPlex Composite	Injection Molder Carbon Fiber	Woven Carbon Fiber
Tweeter, 1"(25mm), Pivoting Dome	Silk Ferrofluid Cooled	Aluminum Ferrofluid Cooled	Ceramic Coated Aluminum Ferrofluid Cooled
Frequency Response	42Hz-20kHz	40Hz-20kHz	35Hz-21kHz
Power handling	5-100 Watts	5-125 Watts	5-150Watts
SPL @ 1 Watt/1 meter	90db	90db	91.5db
Impedance 8 ohm Nominal	Fixed Crossovers	3 Position Crossovers	3 Position Crossovers
Length x Width x Depth	12 1/4"(311mm)x8 3/16"(208mm)x3 1/16"(168mm)	12 1/4"(311mm)x8 3/16"(208mm)x3 1/16"(168mm)	12 1/4"(311mm)x8 3/16"(208mm)x3 1/16"(168mm)
Retro-fit Cutout Length x Depth	10 11/16"(272mm)x6 5/8"(168mm)	10 11/16"(272mm)x6 5/8"(168mm)	10 11/16"(272mm)x6 5/8"(168mm)

Part Number	92025 WS650; 92024 WS651; 92018 WS654; 92098 WS800; 92099 WS801; 92023 WS804; 92070 R70VT 70Volt Xrmr
Manual URL	<a href="http://www.currentaudio.com">www.currentaudio.com</a>
Accessories	NC6WB; NC8WB New Construction Bracket Volume Control ZL45R, ZL60S, SpeKap



CURRENTAUDIO™

[www.currentaudio.com](http://www.currentaudio.com)  
©2009 Current Audio LLC  
1830 John Towers Avenue El Cajon, CA 92020 Sales 866-927-7181

Specifications subject to change without notice.

WS Series 1110 RPA

# WS Series Ceiling Speaker User's Installation Guide

SPECIFICATIONS for WS80 Series	WS800	WS801	WS804
Driver 8" with Butyl Rubber Surround	MetaPlex Composite	Injection Molder Carbon Fiber	Woven Carbon Fiber
Tweeter, 1"(25mm) Pivoting, Dome	Silk Ferrofluid Cooled	Aluminum Ferrofluid Cooled	Ceramic Coated Aluminum Ferrofluid Cooled
Frequency Response	38Hz-20kHz	35Hz-20kHz	33Hz-21kHz
Power handling	5-150 Watts	5-150 Watts	5-150Watts
SPL @ 1 Watt/1 meter	90db	90db	91.5db
Impedance 8 ohm Nominal	Fixed Crossovers	3 Position Crossovers	3 Position Crossovers
Length x Width x Depth	14 7/8"(378mm)x10 1/8"(257mm)x3 3/4"995mm)	14 7/8"(378mm)x10 1/8"(257mm)x3 3/4"995mm)	14 7/8"(378mm)x10 1/8"(257mm)x3 3/4"995mm)
Retro-fit Cutout Length x Width	13 7/16"(341mm) x 8 5/8"(219mm)	13 7/16"(341mm) x 8 5/8"(219mm)	13 7/16"(341mm) x 8 5/8"(219mm)

## Packaging and Enclosed Parts

Please inspect your pack for damaged or missing parts. Notify your supplier if any discrepancies occur.

There are four (4) parts in the package: Two (2) main speaker housings and two (2) grilles.

Only simple hand tools are required for assembly and installation.

Required tools: #2 Phillips screwdriver only, if you have new construction brackets previously installed.

Drywall Hand saw if no New Construction Brackets were installed. A saber saw may be required if you are cutting into plywood.

## Painting the Speaker Grille

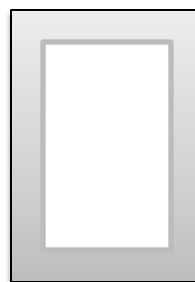
If grille requires painting, carefully remove the white scrim cloth on the inside of the Grille and save for reinstallation. This cloth is provided for aesthetic purpose only. Either spray paint the grille or use a stiff stipple paint brush. Do Not clog the perforated holes as this will impede the acoustics of the speaker.

### 1

Using the supplied Trace Template, place the cutout template against the ceiling and trace along the inside cutout. It is suggested to cut a small pilot hole to verify no obstructions, such as pipes or beams, that could hinder the install.

Carefully cut out the ceiling material along the circle. A drywall saw is perfect for this step. Hold a box or trash can under your cutting to catch the debris.

**NOTE:** A stud finder may be helpful to locate the ceiling beams. You want to layout the hole to the side of any beams.



Trace Template

### 2

After you have cut your desired hole from the template, locate the speaker wire for that speaker.

Pull enough wire slack down to attach the 2 conductor wire to the gold plated constant tension spring-loaded terminals.

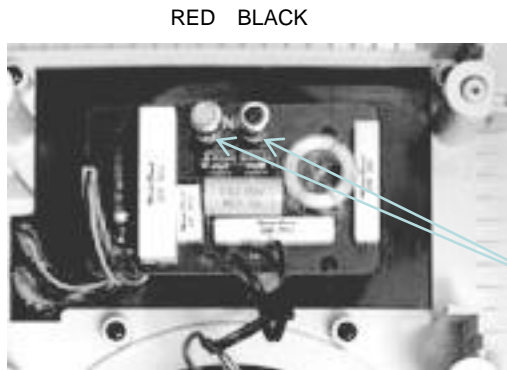
Remove about 2" of the outer jacket then strip about 1/2" insulation from each wire and slightly twist the strands to ensure all strands can be inserted into the hole. Refer to next picture for location of the gold plated constant tension spring-loaded terminals.

Push down on the RED (+) colored Terminal and insert the Red or copper colored conductor all the way up to the insulation into the hole at the bottom of the terminal. Now release your finger from the terminal. Next do the same to the Black or silver colored conductor and insert into the BLACK (-) colored Terminal. Make sure there are NO whiskers from the strands that could cause a short. The other end of these wires will be connected to your amplifier or volume control.

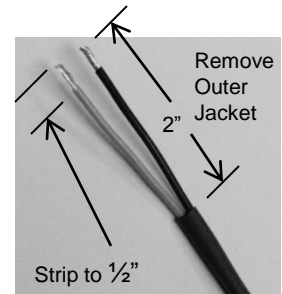
**Note:** Sometimes your wire color may be White (+) and Green (-).

You now have a connection with the proper tension for continued operation that will not wiggle out or cause poor connection.

# WS Series Ceiling Speaker User's Installation Guide

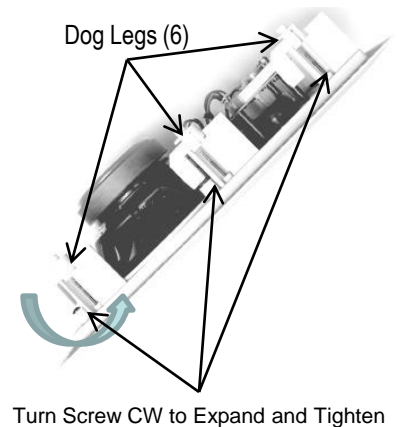
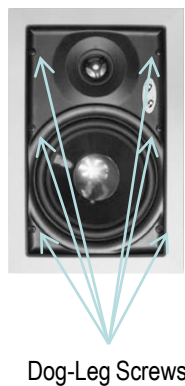


Gold Plated  
Constant Tension  
Spring-loaded  
Terminals



## 3

With the grille removed, loosen the six (6) Dog-Leg screws a ½ turn counterclockwise with a #2 Phillips screwdriver.



## 4

- Hold the speaker by Bezel as shown. Do Not put fingers into the tweeter material in the center of the speaker.  
**WARNING! Denting or deforming the tweeter dome will change the acoustics of the speaker.**
- Insert the connected speaker into the cut-out hole and with a #2 Phillips screwdriver tighten the six(6) Dog-leg screws (clockwise) until the Dog-legs open and clamp the speaker to the ceiling. If using a power drill or electric screw gun use the **lowest** torque setting. Over tightening may cause improper fit of the grille, damage to drywall and or damage to speaker.
- Adjust the Tweeter position to your ear area at the "Sweet Spot" by slightly pushing on the outer edge of the tweeter with your thumb.
- **Make the crossover Contour Switch adjustments before installing grille.**  
The Bass and Treble switches on the Tweeter Bridge (as shown in section 4) allows for contour adjustment. Moving the switch to (+) increases the Bass or Treble 3db and to (-) reduces it by 3db. In the (O) setting you achieve a flat frequency response.

**NOTE:** If you have blown-in insulation and/or a potential rodent problem I suggest you install the SpeKap. It is a breathable membrane that will keep rodent droppings, debris, and insulation from entering the back of the speaker that could change the performance of the speaker. See figure on next page.

**NOTE:** The R70VT transformer adapts any Current Audio 8 Ohm speaker for use with multi-speaker 70 Volt commercial distributed public address and sound systems. It features a high power, low insertion loss, wide frequency response quality line matching transformer design. The transformer has multiple primary taps of 30-16-8-4 watts with the secondary at 8 Ohms. See figure on next page.



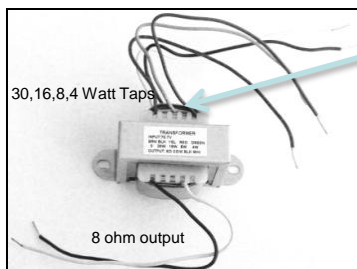
# WS Series Ceiling Speaker User's Installation Guide

In-Wall



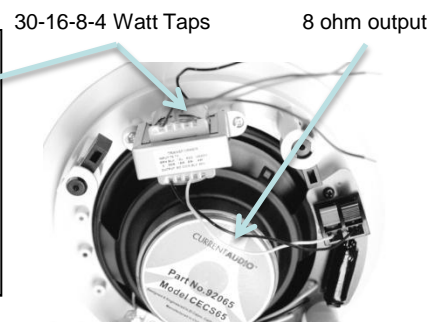
## SpeKap

Breathable Membrane  
Keeps Debris, Rodent Droppings and  
Insulation  
out of the Speaker



## R70VT

70 Volt to 8 ohm  
Directly attaches to stand-offs  
on the CECS Series and all  
CS65 Series

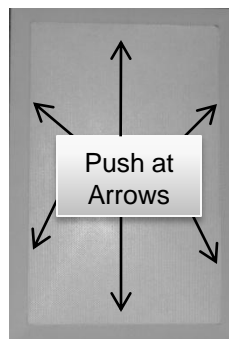


R70VT Mounted on CECS

After Connecting Wires, Inserting Speaker, Cinching Down the Dog Legs and Aiming the Tweeter to the Sweet Spot; Insert the Grille into the Keeper System and Push it Flush to the Bezel. Do not push directly in the center Oil canning will occur. Push the grille down on the sides flush to the bezel.



Step 1, Align the Grille



Step 2, Grille Aligned

## Limited Lifetime Warranty

Current Audio speakers are warranted to be free from defects in materials and or workmanship to the original retail purchaser provided the speaker was purchased and installed from a Current Audio Authorized Dealer.

In the event of defective materials and or workmanship, Current Audio ,LLC will, without charge, repair or replace, at its option, the defective product. In order to make claim under this Warranty and to obtain performance of any obligation under warranty, please contact Current Audio LLC. Instructions will be given on how to return the defective product to Current Audio. Returned products must be shipped prepaid. Proof of purchase must be provided with the product.

The Warranty does not apply to damage not resulting from defective materials and or workmanship while in the possession of the original consumer or due to unreasonable use by the original consumer, which includes but not limited to improper installation, negligence, unauthorized repair or modification, aesthetic deterioration from the environment. Products purchased by unauthorized sources will void the warranty and not be honored.

Current Audio ,LLC is not liable for any incidental or consequential damages, so the above limitations or inclusion may not apply to you. This warranty gives you specific legal rights, and you may have other rights, which vary from state to state within the United States.