Community®

Distributed Design Series™

High-Fidelity
Coaxial Ceiling Loudspeakers

Installation and Operation Manual

D10

D10SUB

Model	Driver Diameter		Description
D4LP	4.5"	114.3 mm	full-range, low profile
D4	4.5"	114.3 mm	full-range
D5	5.0"	127 mm	full-range
D6 & D6-B	6.5"	165.1 mm	full-range
D8	8.0"	203.2 mm	full-range
D10	10.0"	254.0 mm	full-range
D10SUB	10.0"	254.0 mm	subwoofer

Introduction

Thank you for selecting the Community Distributed Design Series™ of ceiling loudspeakers. Whether you chose them because they deliver exceptionally high quality sound, because they have predictable, uniform coverage so spaces are easy to lay out, because they are easy to install and save time, or because they are very competitively priced for such a high-performance, durable loudspeaker, you can have confidence you made the right choice.

The Distributed Design Series is built to satisfy safety agency standards, with quality assured by Community's long history of building high-performance, durable loudspeakers for sound reinforcement and contracting applications.

The Distributed Design Series is comprised of these seven models:

Model	Driver Diameter		Response
D4LP	4.5"	114.3 mm	full-range
D4	4.5"	114.3 mm	full-range
D5	5.0"	127.0 mm	full-range
D6 & D6-B	6.5"	165.1 mm	full-range
D8	8.0"	203.2 mm	full-range
D10	10.0"	254.0 mm	full-range
D10SUB	10.0"	254.0 mm	subwoofer

Each model is available as a complete assembly, including everything needed for standard installations, or you can purchase packages for the face portion only or the back can portion. Each of these packages has components for two loudspeakers. The D4LP Low Profile model fits where deeper units cannot and may be retrofitted into existing shallow cans.

Except for the D10SUB subwoofer, each of the other six models is a true coaxial loudspeaker. This means it has a real compression driver concentrically arranged so that the upper frequencies emerge through the center of the low-frequency driver's magnetic structure and cone via a precisely tapered Tru-Phase™ high-frequency waveguide. This special construction provides consistent, wide dispersion right up to 16 kHz, all but eliminating high-frequency narrowing. You don't have the reflection and diffraction problems at multiple frequencies found with "straight tube" coaxial loudspeakers, simple "whizzer-cone" loudspeakers, or front-mounted soft dome high frequency loudspeakers (typically found in ceiling speakers at this price point) that attempt to emulate a true coax design.

Further pattern improvement is achieved by precisely mounting the low frequency driver (and its' concentric HF driver) dead-center in the baffle, as contrasted to the offset designs used by many others.

Most competitive ceiling loudspeakers typically have a half-inch or greater, "step" in their face where the grille is attached, and the low-frequency driver is rear-mounted behind the grille plate. Such designs produce unwanted reflections and diffraction effects such as frequency response peaks and nulls, polar irregularities, and phase response problems. To avoid these issues, Community Distributed Design baffles are very close to the grille (less than 1/8 inch away). The loudspeaker baffle and ceiling thus form an uninterrupted planar surface for diffraction-free HF driver acoustic loading and a smooth, predictable pattern. This makes it easy to lay out your loudspeaker installation for optimum coverage without those unwanted dead zones or too-loud overlaps.

The Distributed Design Series saves you money in several ways. (a) Their powerful magnetic structures and efficient coils ensure high output, which gives you more headroom per power amplifier so you can use a smaller amp that will save you money. (b) These loudspeakers are very competitively priced and (c) Community designed this series with place-through-the-cutout Tile Support Bridge Rails, Drop-Stop™ installation assistant tabs, Twist-Assist™ loudspeaker face retainer tabs, and other innovations so that one person on a ladder is easily able to install the loudspeaker in the ceiling. Overall, this saves a tremendous amount of time and labor during the installation. You can use 8-ohm or constant voltage distribution for which you get a 70 volt / 100 volt transformer built in.

We urge you to read these instructions carefully and familiarize yourself with the features and installation methods before you begin the job. If you have any questions or concerns, please contact Community right away.

Table of Contents

About this manual

Every effort has been made to ensure that the information contained in this manual was complete and accurate at the time of printing. However, due to ongoing technical advances, changes or modifications may have occurred that are not covered in this publication. The latest version of this manual and the most recent product information published by Community is always available at:

http://www.communitypro.com

Table of Figures

Important Safety Instructions

Always follow these basic safety precautions when using or installing Distributed Design loudspeakers and accessories:

- Read these instructions.

- Keep these instructions.

- Heed all warnings.

- Follow all instructions, particularly those pertaining to rigging, mounting, hanging and electrical connections.

- Do not use this apparatus near water.

- Clean only with dry cloth.

- Do not block any ventilation openings. Install in accordance with the manufacturer's instruction.

- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

- Only use attachments/accessories that are specified and approved by the manufacturer.

- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

The terms caution, warning, and danger may be used in this manual to alert the reader to important safety considerations. If you have any questions or do not understand the meaning of these terms, do not proceed with installation. Contact your local dealer, distributor, or call Community directly for assistance. These terms are defined as follows:

CAUTION: describes an operating condition or user action that may expose the equipment or user to potential damage or danger.

WARNING: describes an operating condition or user action that will likely cause damage to the equipment or injury to the user or to others in the vicinity.

DANGER: describes an operating condition or user action that will immediately damage the equipment and/or be extremely dangerous or life threatening to the user or to others in the vicinity.

WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

These servicing instructions are for use by qualified service personnel only. To reduce the risk of fire or electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

The loudspeakers described in this manual are designed to be 'flown' or suspended for maximum acoustical performance using a variety of rigging hardware, means, and methods in some applications. It is essential that all installation work involving the suspension of these loudspeaker products be performed by competent, knowledgeable persons who understand safe rigging practices. Severe injury and/or loss of life may occur if these products are improperly installed. Please read the section on wiring and installation for additional information.

L'information de Sûreté Importante

PRECAUTION : Veuillez toujours suivrent ces mesures de sécurité de base lors de l'utilisation ou lors de l'installation des haut-parleurs Distributed Design et de ces accessoires:

• Lisez et Gardez les instructions.

• Observez tous les avertissements.

• Suivez toutes les instructions, particulierement ceux concernant le calage, support, montage et raccordements électriques.

• Ne pas utiliser cet appareil près de l'eau.

• Nettoyez seulement avec un tissu sec.

• Ne pas bloquer les ouvertures de ventilation. Installer conformément aux instructions du fabricant.

• Ne pas installer près des sources de chaleur comme les radiateurs, les cuisinières, foyers ou autres appareils (y compris les amplificateurs) qui peuvent produire de la chaleur.

• Utilisez seulement les accessoires qui sont spécifiés et approuvés par le fabricant.

• Référez tout entretient au personnel qualifié de service. Ceci est exigé quand l'appareil a été endommagé de quelque façon, incluant le fil d'alimentation et ou l'embout du fil a été endommagé, des liquides ont été renversés ou des objets sont tombé à l'intérieur de l'appareil, l'appareil a été exposé à la pluie ou l'humidité, l'appareil ne fonctionne pas normalement ou a été échappé.

Les termes attention, avertissement, et danger peut être utilises dans ce manuel pour alerter le lecteur aux considérations importantes de sûreté. Si vous avez des questions ou ne comprenez pas la signification de ces termes, ne procédez pas à l'installation. Contactez votre detaillant, distributeur, ou Community directement pour assistance. Les termes sont définies ci-dessous:

ATTENTION : décrit une condition de fonctionnement ou une action d'utilisateur qui peuvent exposer l'équipement ou l'utilisateur aux dommages potentiels ou au danger.

AVERTISSEMENT : décrit une condition de fonctionnement ou une action d'utilisateur qui peuvent causer des dommages probable à l'équipement et/ou à l'utilisateur et à ceux se trouvant à proximité.

DANGER : décrit une condition de fonctionnement ou une action d'utilisateur qui endommageront immédiatement l'équipement et/ou seront extrêmement dangereuses et qui peut représenter un danger pour la vie à l'utilisateur et à ceux se trouvant à proximité.

AVERTISSEMENT : Pour réduire le risque de feu ou de décharge électrique, ne pas exposer cet appareil à la pluie ou l'humidité.

Ces instructions d'entretient sont pour l'usage d'un personnel de service qualifié seulement. Pour réduire le risque de feu ou de décharge électrique n'exécutez aucun entretient autrement que ce qui est contenu dans les instructions d'opérations à moins que vous êtes qualifié pour le faire.

Les haut-parleurs décrits en ce manuel sont conçus pour être accroché ou suspendus afin d'atteindre une exécution acoustique maximum en utilisant une série de differents matériaux, moyens, et méthodes de calage dans certaines applications. Il est essentiel que tout le travail d'installation impliquant la suspension de ces produits de haut-parleur soit effectué de facon securitaire par des personnes compétentes et bien formées dans les methodes de calage. Des blessures graves et/ou des pertes humaines peuvent se produire si ces produits sont incorrectement installés. Veuillez lire la section sur le câblage et l'installation pour des informations supplémentaires.

EC Statement of Conformity

This document confirms that the range of products of Community Professional Loudspeakers bearing the CE label meet all of the requirements in the EMC directive 89/336/EEC laid down by the Member States Council for adjustment of legal requirements. Furthermore, the products comply with the rules and regulations referring to the electromagnetic compatibility of devices from 30-August-1995.

The Community Professional Loudspeaker products bearing the CE label comply with the following harmonized or national standards:

DIN EN 55013:08-1991
DIN EN 55020:05-1995
DIN EN 55082-1:03-1993
The authorized declaration and compatibility certification resides with the manufacturer and can be viewed upon request. The responsible manufacturer is the company:

Community Professional Loudspeakers
333 East Fifth Street
Chester, PA 19013-4511
USA

TEL: (610) 876-3400
FAX: (610) 874-0190

Chester, PA USA   December, 2013

Unpacking and Inspection

Community Distributed Design loudspeakers are engineered and manufactured to be rugged and they are carefully packed in sturdy cartons. However, it is wise to thoroughly inspect each unit after it has been removed from the packaging, as damage could occur during shipping.

Please note that once the shipment has left your dealer or the Community factory, the responsibility for damage is always borne by the freight company. If damage has occurred during shipping, you must file a claim directly with the freight company. It's very important to contact the freight company as soon as possible after receiving your shipment, as most freight companies have a short time limit within which they will investigate claims. Make sure to save the carton and the packing material, as most claims will be denied if these materials are not retained. Your Community dealer and the factory will try to help in any way they can, but it is the responsibility of the party receiving the shipment to file the damage claim.

It's always a good idea to retain the carton and packing materials indefinitely, if possible, in the event that the unit may need to be returned to your dealer or distributor for repair in the future.

For each of the seven models in the Distributed Design Series, it is possible to order a full *Ceiling Loudspeaker Assembly*, a *Face-Only Assembly* or a *Back Can Assembly*. Consult the three lists (beginning on the next page) to find the contents of each carton for the version of the assembly you have ordered.

Option 1: Full Ceiling Loudspeaker Assembly*

Models: D4LP, D4, D5, D6, D6-B, D8, D10, D10SUB
- Ceiling Loudspeaker Assembly (Qty 2)
- Back cans (Qty 2)
- Tile Support Bridge Rails (Qty 4)
- Grilles (Qty 2)
- C-Ring Support Plates (Qty 2)
- Cut-out template (can-sized) (Qty 1)
- Paint Masks (Qty 2)
- Flat screwdriver (Qty 1) (for screws, connectors and to help remove the grille)

**Loudspeakers
(secured in their back cans)**

Grilles

C-Ring Support Plates

Tile Support Bridge Rails

Cut-out Template

Paint Masks

Flat screwdriver
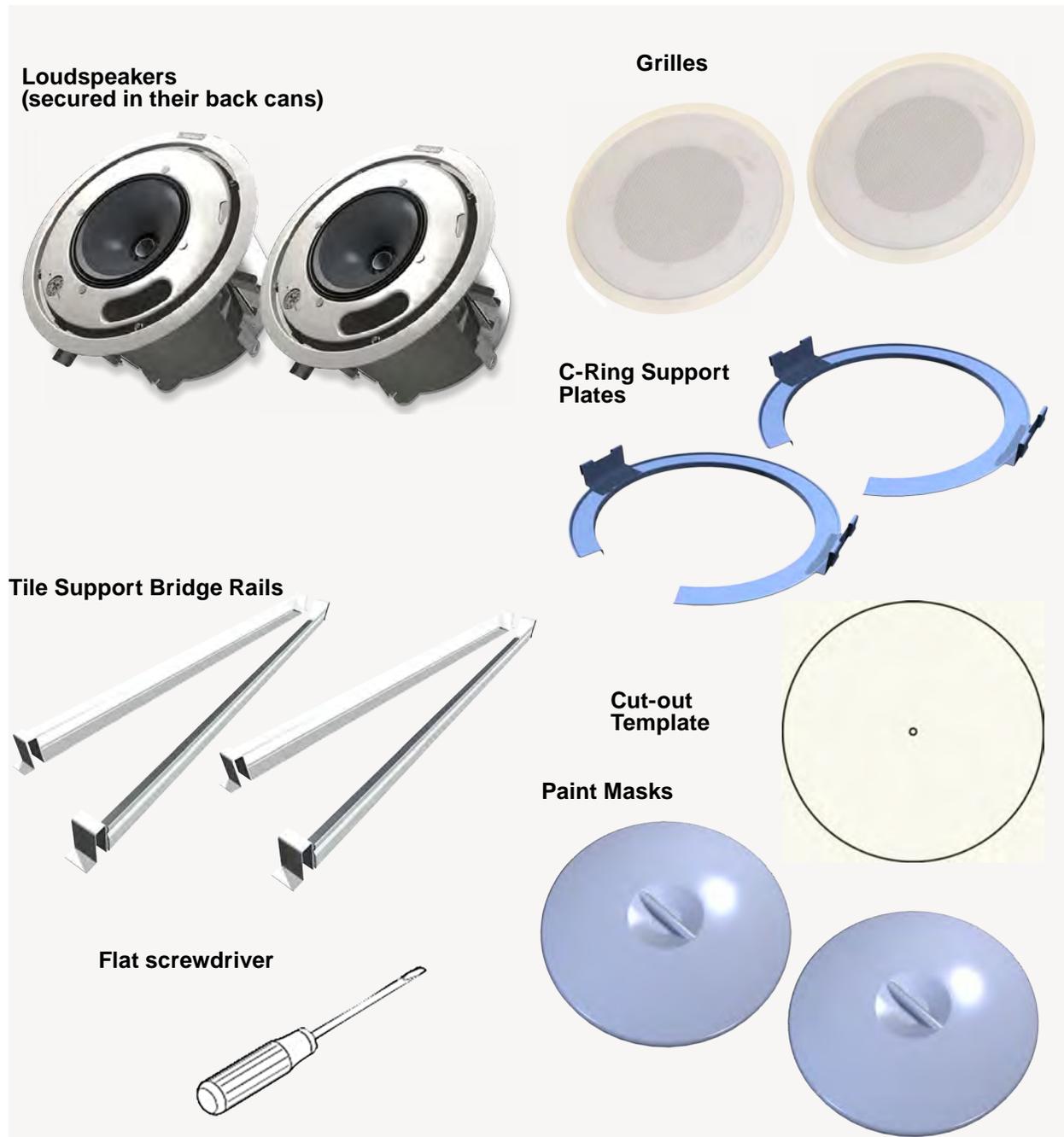
Figure 1. Full Ceiling Loudspeaker assembly package contents (typical)

Note: *These illustrations are typical. The actual parts appearance differs among the various models in this series.*

Option 2: Face Only

Models: D4-FO, D5-FO, D6-FO, D6-FO-B, D8-FO, D10-FO, D10SUB-FO
- Ceiling Loudspeakers (Qty 2)
- Grilles (Qty 2)
- Paint Masks (Qty 2)
- Cut-out template (can-sized) (Qty 1)

- 4mm x 20mm Phillips Pan Head Screws (x8 pieces for D4LP, D4, D5 or D6; x16 pieces for D8, D10 and D10SUB)
- Flat screwdriver (Qty 1) (for screws, connector and to help remove the grille)

Loudspeakers

Grilles

Cut-out Template

Paint Masks
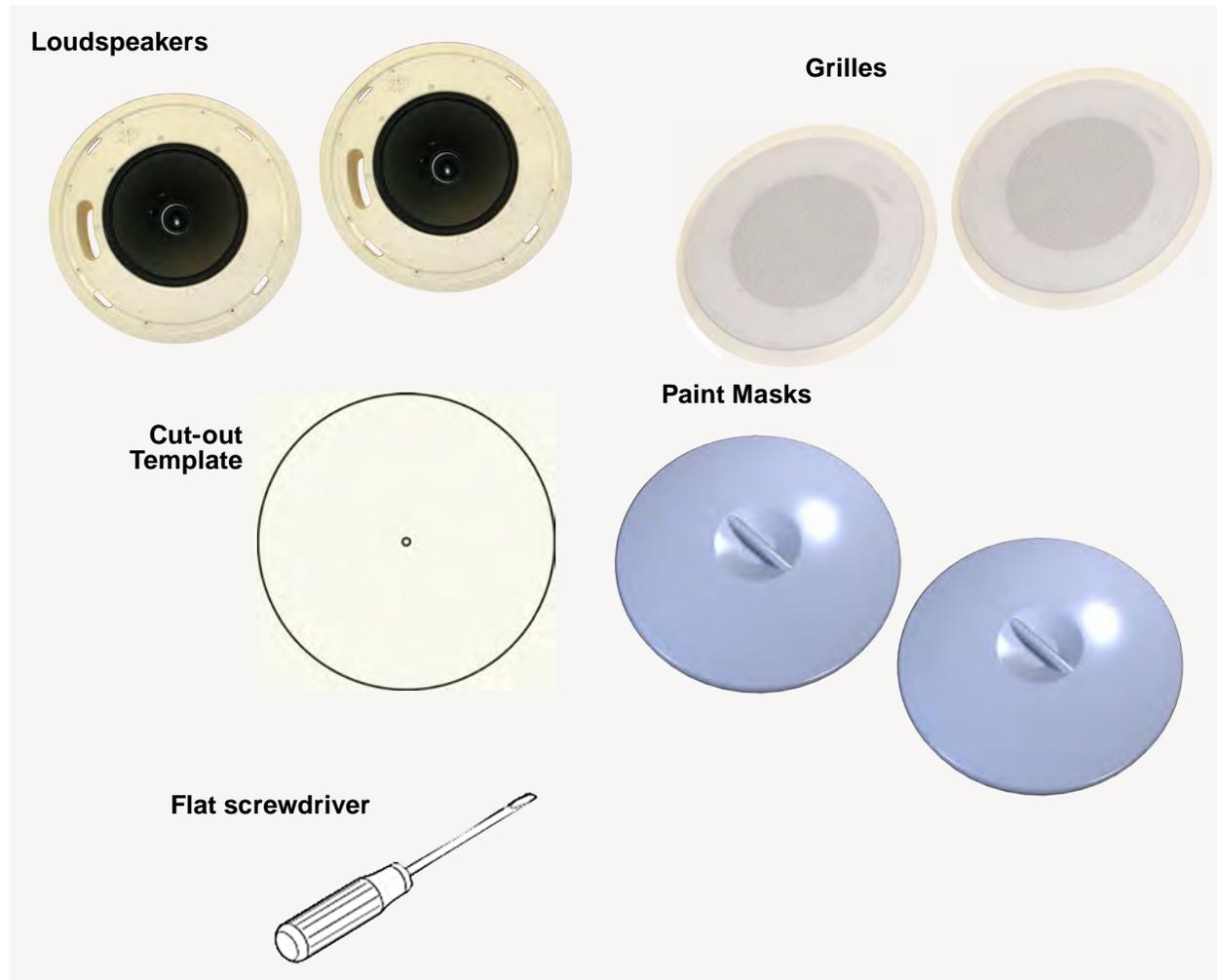
Flat screwdriver

Figure 2. Face Only package contents (typical)

Option 3: Back Can

(Models: D4LP-BC, D45-BC, D6-BC, D8-BC, D10-BC)
- Back cans (Qty 2)
- Tile Support Bridge Rails (Qty 4)
- C-Ring Support Plates (Qty 2)
- Cut-out template (can-sized) (Qty 1)
- Flat screwdriver (Qty 1) (for screws, connectors and to help remove the grille)

Back Cans

C-Ring Support Plates

Tile Support Bridge Rails

Cut-out Template

Flat screwdriver
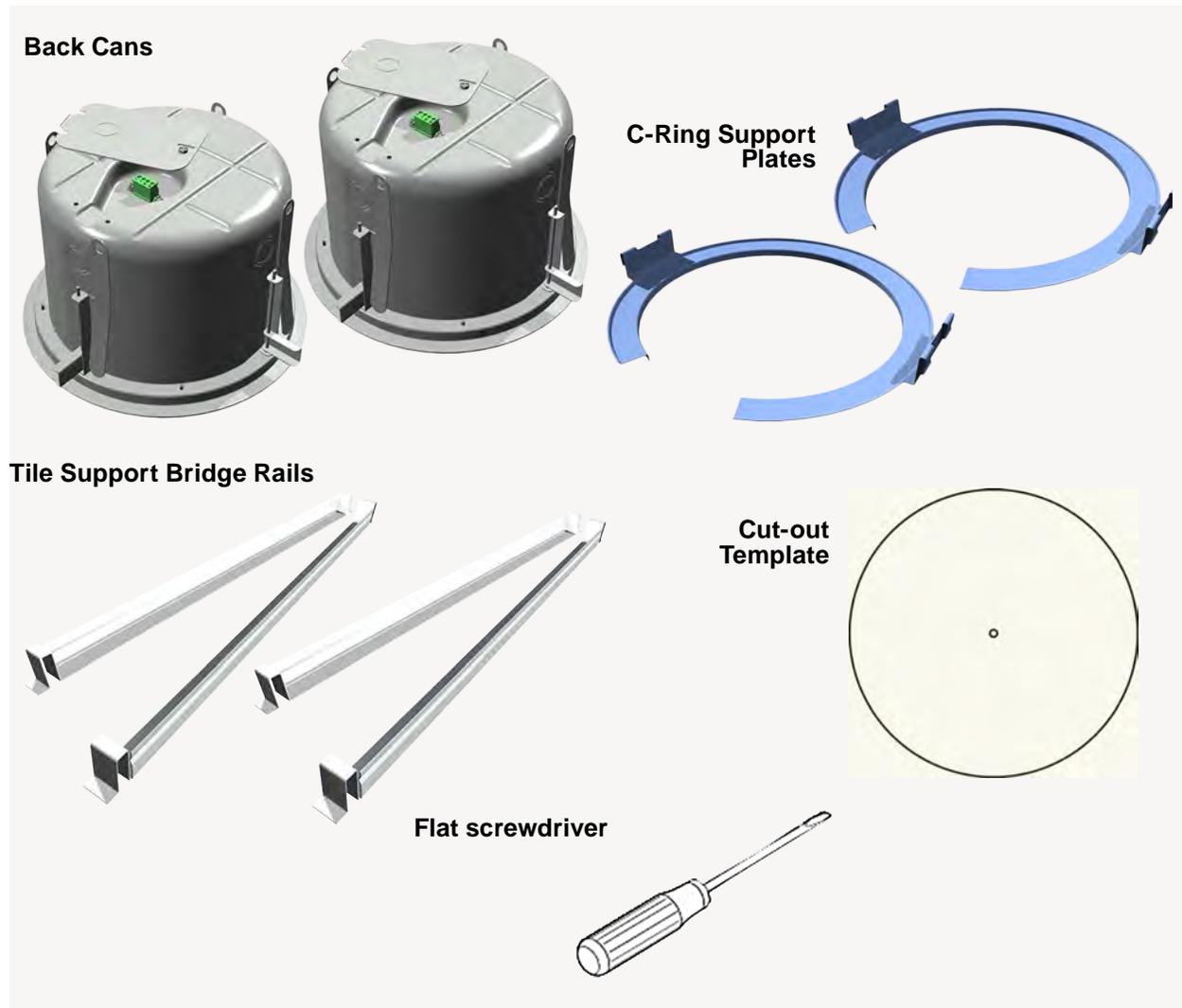
Figure 3. Back Can package contents (typical)

Optional Accessories

Community offers helpful optional accessories that are not included with the basic packages. Please be sure to order these parts separately if you need them.

Retrofit rings are available in two types for various loudspeaker group sizes. The Face Adapter Ring allows you to place the Distributed Design loudspeaker alone in a non-Community made back can. The Can Adapter/Trim Ring allows you to mount an entire Distributed Design loudspeaker assembly with its Community back can in a larger non-Community back can or to mount the loudspeaker assembly into an existing but over-size ceiling cutout hole. If you're performing a retrofit, you will want to order the type of adapter you need in the size suitable for the loudspeaker. (These rings are not offered for the 8 or 10 inch diameter loudspeakers.) As suggested by its name, the Can Adapter ring can be used as a Trim Ring. When used as a trim ring, white rubber hole plugs (included) fill the 4 countersink indents intended for mounting the ring to an existing larger industry back can

A New Construction Bracket is available for installing loudspeakers in new construction before drywall or plaster is put in place. The drywall typically is cut with a router-type tool or laser guided cutter in which case the bracket hole will serve as a cutout guide.

New Construction Bracket

Face Adapter Ring

Can Adapter/Trim Ring
(without and with screw hole plugs)

Figure 4. Optional Accessories

| Size | Ceiling Loudspeaker Packages | | | Adapter Rings | | Brackets |
	Assembled	Back Can Only	Face Only	Face	Can Adapter/Trim	New Construction
4.5" Low Pro.	D4LP	D4LP-BC	D4-FO	D45-FAR	D45-CATR	D45-NCB
4.5"	D4	D45-BC				
5"	D5		D5-FO			
6.5"	D6, D6-B	D6-BC	D6-FO D6-FO-B	D6-FAR	D6-CATR	D6-NCB
8"	D8	D8-BC	D8-FO	–	–	D6-NCB
10"	D10	D10BC	D10-FO	–	–	D10-NCB
10" Subwoofer	D10SUB		D10SUB-FO	–	–	

Note: All sizes are listed. Dashes indicate item not offered. Some models share a common back can or accessory bracket/ring, as indicated in the chart.

Specifications

Model	D4LP	D4	D5	D6, D6-B	D8	D10	D10SUB
Ceiling Loudspeaker Type	Full Range Coax	Full Range Coax	Full Range Coax	Full Range Coax	Full Range Coax	Full Range Coax	Subwoofer
Description	4.5" Low Profile	4.5" Standard	5.0" Standard	6.5" Standard	8.0" Standard	10.0" Standard	10.0" Subwoofer
Max Input Power Rating (8 ohms, continuous RMS)	60 Watts	60 Watts	100 Watts	100 Watts	150 Watts	200 Watts	200 Watts
Nominal Impedance	8 ohms	8 ohms	8 ohms	8 ohms	8 ohms	8 ohms	8 ohms
Maximum Voltage at Driver (RMS)	15.49 V (30 W)	21.91 V (60 W)	21.91 V (60 W)	30.98 V (100W)	30.98 V (120W)	40 V (200 W)	40 V (200 W)
Nominal - 6 dB Beamwidth	140° conical	140° conical	130° conical	125° conical	120° conical	110° conical	180° conical
HF Compression driver (VC dia.)	.75"/19.4 mm	.75"/19.4 mm	.803"/20.4 mm	.803"/20.4 mm	1"/25.4 mm	1"/25.4 mm	N/A
LF loudspeaker (cone dia.)	4.5"/114.3 mm	4.5"/114.3 mm	5.0"/127 mm	6.5"/165.1 mm	8"/203.2 mm	10"/254 mm	10"/254 mm
LF loudspeaker (Voice Coil dia.)	1"/25.4 mm	1" / 25.4 mm	1.5" / 38.1 mm	1.5" / 38.1 mm	2.0" / 50.8 mm	2.5" / 63.5 mm	2.0" / 50.8 mm
Input Connection	Connector for two pair of 2-wire leads, uninterrupted whether loudspeaker is connected or not.						
Internal Connection	Euroblock Quick Disconnect						
Available 70V Taps (watts)	30-15-7.5-3.75	30-15-7.5-3.75	60-30-15-7.5	60-30-15-7.5	120-60-30-15	200-100-50-25	200-100-50-25
Available 100V Taps (watts)	NC†-30-15-7.5	NC†-30-15-7.5	NC†-60-30-15	NC†-60-30-15	NC†-120-60-30	NC†-200-100-50	NC†-200-100-50
Low Impedance	8 ohms	8 ohms	8 ohms	8 ohms	8 ohms	8 ohms	8 ohms
Enclosure	Zinc Plated Steel (corrosion resistant)						
Knockout Strain Relief (Qty)	1	3	3	4	4	4	4
Face Clips (Qty)	3	3	3	4	4	4	4
Mounting Rigging Points (Qty) (# of steel mounting clips)	3	3	3	4	4	4	4
Grille	Powder Coated Steel Grille with Safety Metal Clip						
Included Accessories	(2) C-Ring Supporting Plates, (2) Grilles, (2) paint masks, cut-out template, screwdriver						
Optional Accessories	Retrofit Adapter Ring (2 types), New Construction Bracket						
Dimensions: Face Diameter:	9.768" (248.1 mm)	9.768" (248.1 mm)	9.768" (248.1 mm)	11.24" (285.5 mm)	13.209" (335.5 mm)	15.197" (386 mm)	15.197" (386 mm)
Depth from Baffle back:	3.599" (91.4 mm)	6.788" (172.4 mm)	6.788" (172.4 mm)	6.788" (172.4 mm)	8.166" (207.4 mm)	9.938" (252.4 mm)	9.938" (252.4 mm)
Cutout Diameter	8.75 " (222 mm)	8.75" (222 mm)	8.75" (222 mm)	10.25" (260 mm)	12.25" (311 mm)	14.125" (359 mm)	14.125" (359mm)

†The designation NC means do not use this setting when connected to a 100-volt system as it would draw too much power. NC means "No-Connect," really "do not connect."

Safety Agency Compliance

ETL LISTED
C US
Intertek
4001450

Conforms to UL1480 Standard

Conforms to UL2043 Standard

Certified to CSA C22.2 No. 60065 Standard

For protection against electrical shock and to meet the requirements of the UL2043 standard, the speaker assembly must be installed in the appropriate Listed Community Distributed Design Series Back Box or similar UL1480/UL2043 Listed enclosure. Minimum dimensions for the enclosure for each model must be:

Model	Required Minimum Enclosure Size for UL1480/UL2043 Compliance (Width x Length x Depth)
D4-FO	7.362" x 7.362" x 3.504"
D5-FO	7.362" x 7.362" x 6.693"
D6-FO D6-FO-B	8.858" x 8.858" x 6.693"
D8-FO	10.827" x 10.827" x 8.071"
D10-FO	12.795" x 12.795" x 9.843"
D10SUB-FO	12.795" x 12.795" x 9.843"

*Minimum enclosure thickness must be 1mm for all enclosures.

Additional Compliance Information

Suitable for use in air handling spaces per NFPA70 National Electrical Code 2008 Article 300.22(c)(2) and NFPA 90 Installation of Air Conditioning and Ventilation Systems 2009 Article 4.3.11.2.6.5.

SUITABLE FOR USE IN AIR HANDLING SPACES

Figure 5. D45-BC Back can dimensions

Ø7.142" (181.4)

6.622" (168.2)

6.492" (164.9)

Ø8.249" (209.5)

Ø9.322" (236.8)

Figure 7. D4LP-BC Back can dimensions

Ø7.189" (182.6)

3.552" (90.2)

3.421" (86.9)

Ø8.303" (210.9)

Ø9.384" (238.3)
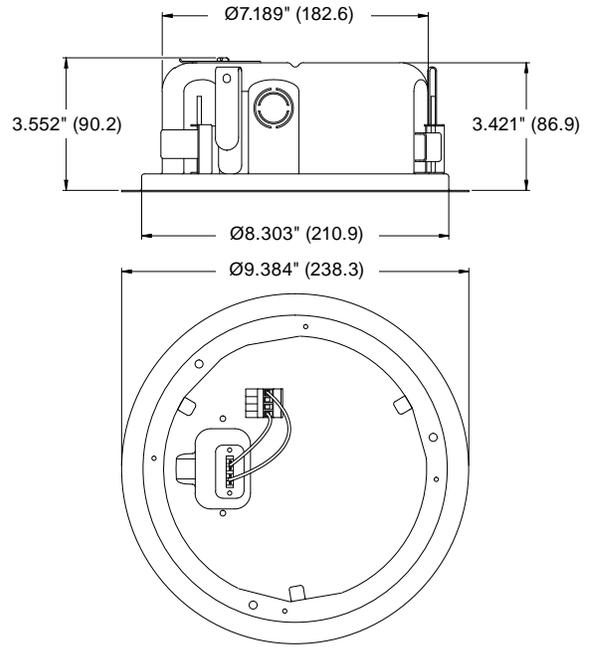
Note: The same D4-FO Loudspeaker face assembly is used for the D4 and D4LP as these models differ only with respect to their back cans.

Figure 6. D4-FO Loudspeaker dimensions

3.293" (83.7)

.442" (11.2)

Ø8.386" (213)

Ø9.768" (248.1)

Figure 8. D5-FO Loudspeaker dimensions

4.934" (125.3)

.442" (11.2)

Ø8.386" (213)

Ø9.768" (248.1)
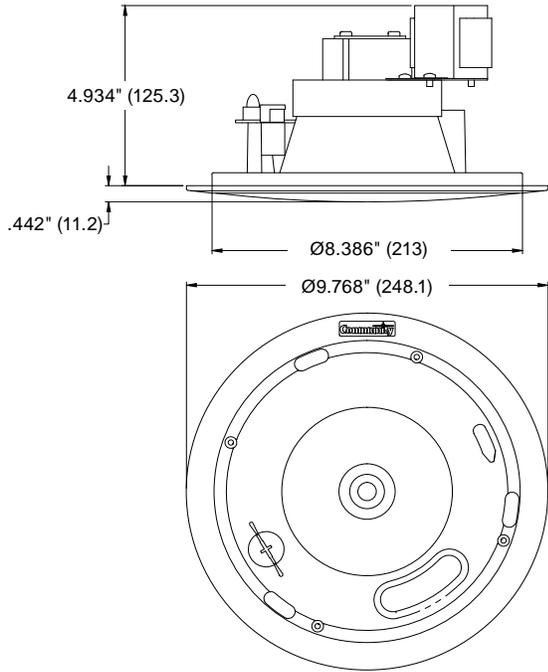
Note: The D5-FO uses the same D45-BC back can as the D4-FO.

Figure 9. D6-BC Back can dimensions

Ø8.858" (225)

6.651" (168.9)

6.520" (165.6)

Ø9.742" (247.4)

Ø10.797" (274.2)
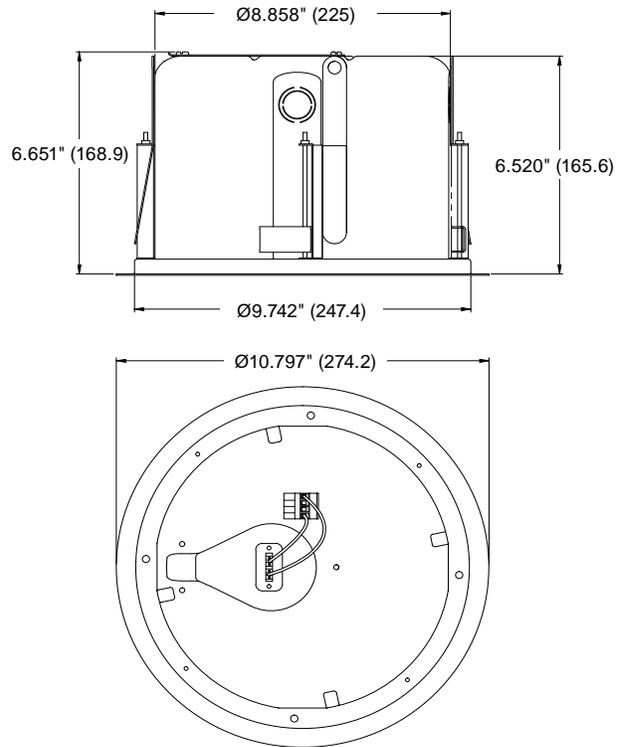
Figure 10. D6-FO Loudspeaker dimensions

4.677" (118.8)

.462" (11.7)

Ø9.881" (251)

Ø11.24" (285.5)
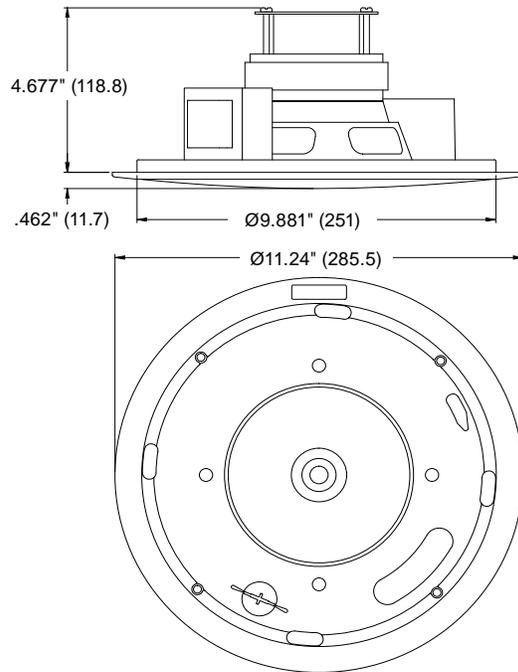
Figure 11. D8-BC Back can dimensions

Ø10.592" (269)

8.027" (203.9) 7.896" (200.6)

Ø11.709" (297.4)

Ø12.769" (324.3)
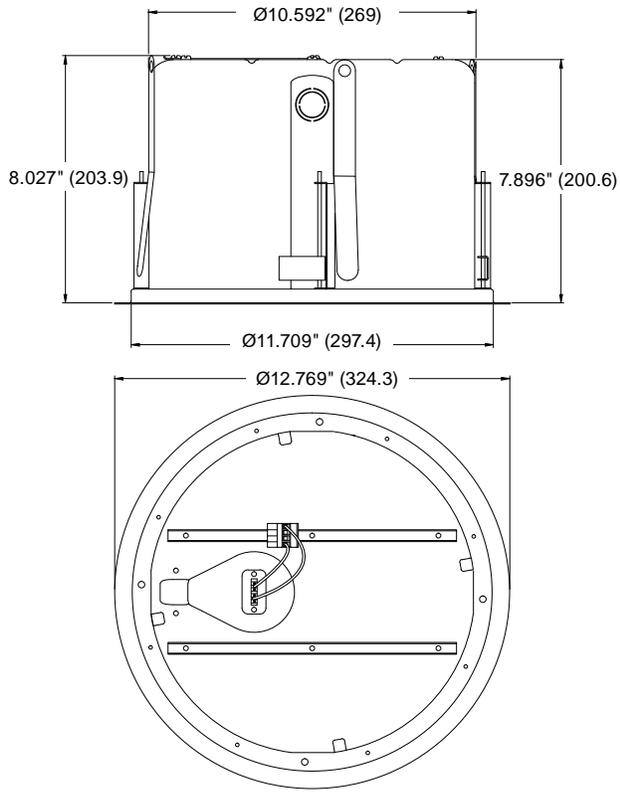
Figure 13. D10-BC Back can dimensions

Ø12.431" (315.7)

9.693" (246.2) 9.563" (242.9)

Ø13.54" (343.9)

Ø14.611" (371.1)
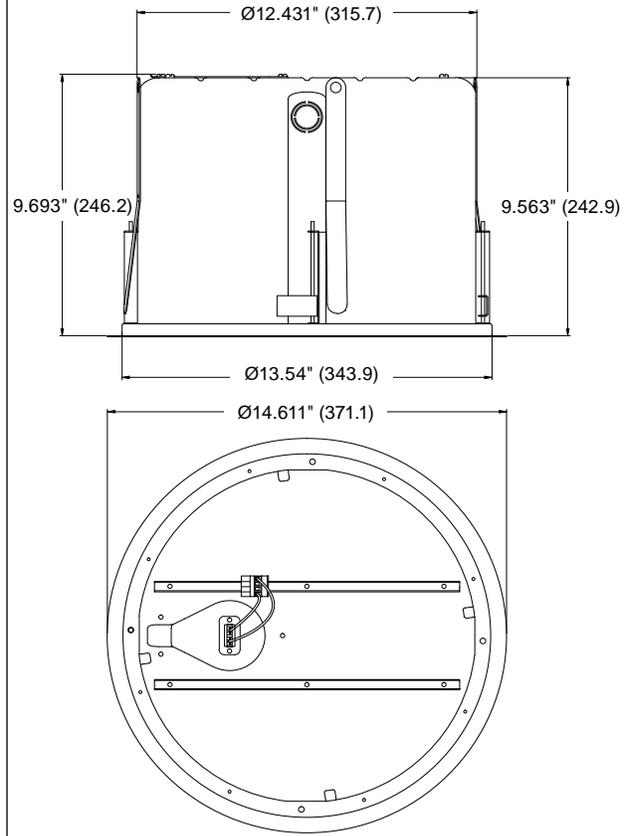
Figure 12. D8-FO Loudspeaker dimensions

6.067" (154.1)

.473" (12)

Ø11.85" (301)

Ø13.209" (335.5)
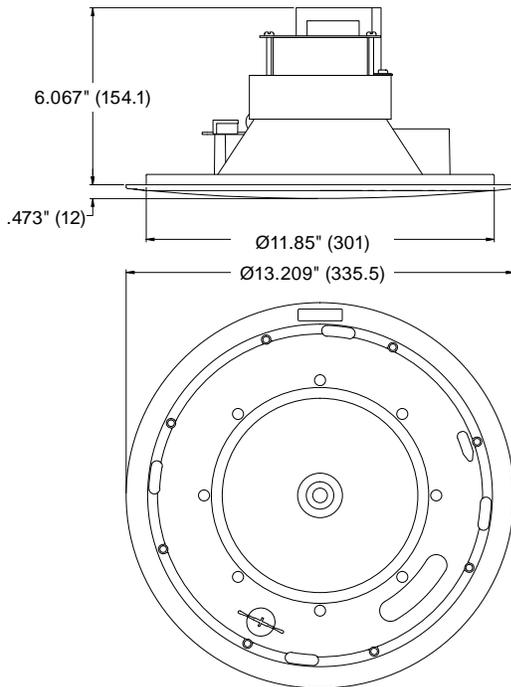
Figure 14. D10-FO Loudspeaker dimensions

7.157" (181.8)

.523" (13.3)

Ø13.819" (351)

Ø15.197" (386)
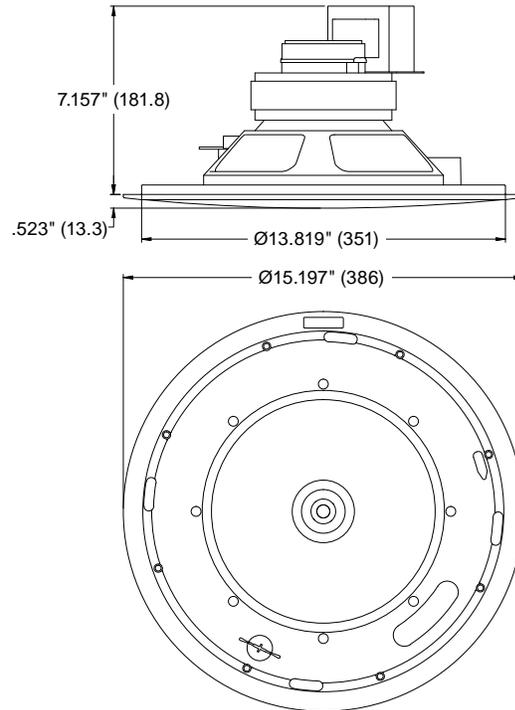
Figure 15. D10SUB-FO Loudspeaker dimensions

7.886" (200.3)

.523" (13.3)

Ø13.819" (351)

Ø15.197" (386)
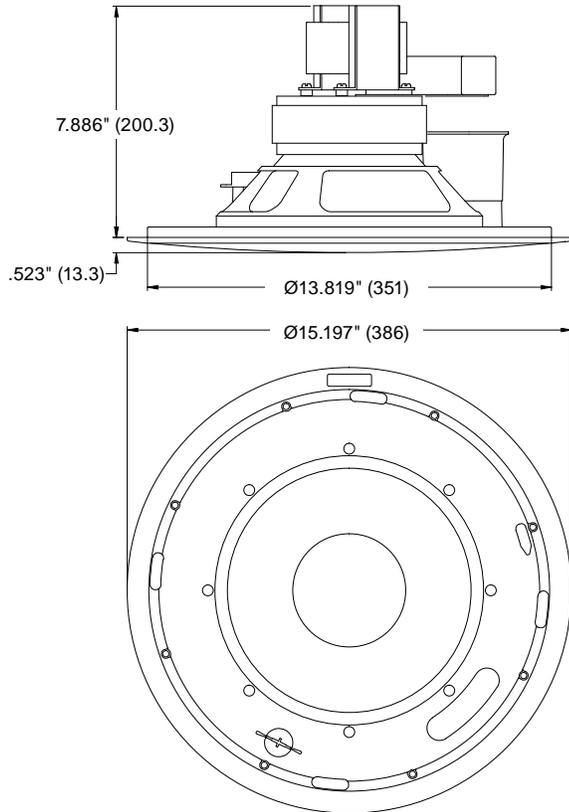
Note: The D10SUB-FO loudspeaker uses the same D10-BC back can as the D10-FO loudspeaker.

Figure 16. Face adapter ring detail
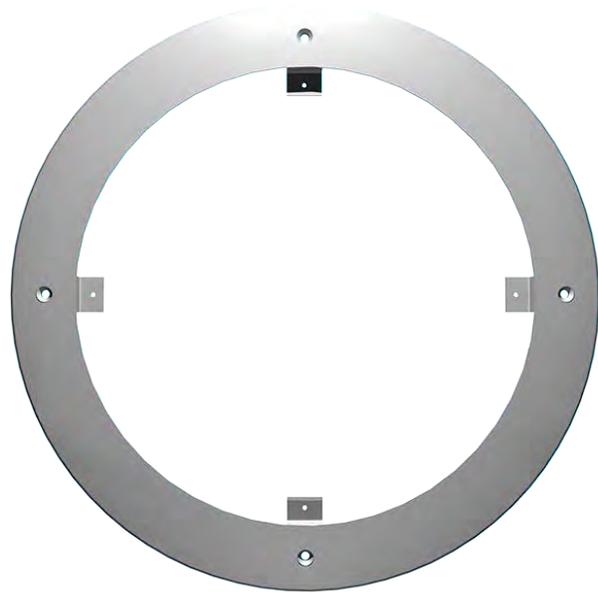
Figure 17. Can adapter / trim ring detail
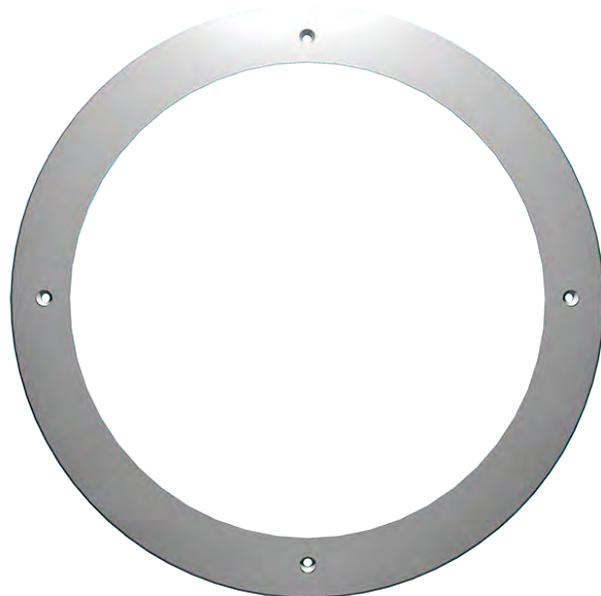
Component Identification

Combination terminal block cover and cable strain relief clamp

Input terminal block

Knockout strain relief on terminal block cover (with conduit installed)

3/4" and 1" knockout strain relief

Zinc plated steel can-locking clamp (4)

Drop-Stop™ tab (4)

Steel can-locking clamp (shown deployed)

Internal leads and plug to bring rear terminal block signal to the loudspeaker's input connector on the circuit board

Twist-Assist™ can mating clip (4)

Bass reflex port

Hole for 4mm sheet metal screw (4 typical)

Zinc plated steel can-locking clamp (4)

Twist-Assist™ face mounting clip (4)

Dog screw alignment slot (4 typical). Used to align face in proper location when installing back can

Loudspeaker input connector on circuit board

Phillips-head can-locking clamp actuator (4)

Figure 18. Component part identification (1)

Bridge rail clip on C-ring support plate

Seismic safety tabs

***Drop-Stop*™ installation assistant tabs**

Steel can-locking clamp (shown retracted)

Tile support bridge rails

Stabilizing flange on rail (faces the loudspeaker)

Low impedance / 70V & 100V transformer tap switch

Grille (shown snapped onto loudspeaker face)

Metal safety clip and high-impact mono filament nylon loops that secure grille to loudspeaker face

Mounting screw holes on optional face adapter ring (left) and optional can adapter/trim ring (right)

Figure 19. Component part identification (2)

Wiring

Note: This section describes the wiring connection of the loudspeaker to the can, and the wiring between the can and loudspeaker. Installation order will depend upon the facility and the installer; pre-installation of the cans including routing the wires to the can location, or cans and loudspeakers at the same time. There is no "perfect or preferred" order for installation. This section describes the general means to wire the cans and loudspeakers before mounting the can into the ceiling (or wall).

This manual will serve to assist in wiring and physically mounting Distributed Design Series loudspeakers. The directions include assistance to those installers using a complete Community package of loudspeakers and accessories, including the back cans, grilles, and tile rails. We include instructions for use of optional Community Distributed Design Series retrofit adapters so that Community Distributed Design Series loudspeakers can be mounted in other manufacturer's cutouts and/or back cans. If accessory products from a different manufacturer are used, please refer to the installation manuals supplied with those products.

Power Determination

As detailed subsequently, there is no need to specially select different wire terminals for 8-ohms or for various 70-volt and 100-volt power taps. Instead, a face-mounted tap switch allows you to make this selection. Once the loudspeaker is mounted correctly in the ceiling, set the tap switch to the appropriate tap setting <u>before</u> any audio is passed through the loudspeaker. <u>Do not</u> change the setting on the tap switch while the loudspeaker is in use.

Installation in back cans without conduit

The only tool required is a screwdriver, which is provided in the Loudspeaker package. Distributed Design back cans include a swivel-out terminal access cover that also serves as a cable clamp when tightened in place. The terminal block in the can's outer recess has two (+) connections and two (-) connections. If you're only connecting one (dual conductor) cable, you can use either (+) and (-) terminal, as illustrated in Figure 20. If you're daisy-chaining a cable to the next can, you can connect the next cable to the remaining (+) and (-) terminals. There is no need to connect jumpers or try to stuff two wires into one terminal block port because each pair of (+) and each pair of (-) terminals is directly jumpered together on the input connector as well as internally on the PC board. Due to this internal jumper on the connector, the parallel connection will be maintained even if the input connector comes unplugged from the loudspeaker's PC board. See Figure 21.

Terminal Block (4.5" can)
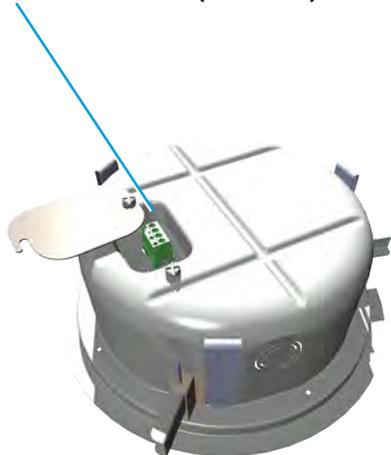
Terminal Block (6.5" can) showing wire connections to the block for a single cable (not daisy-chained)
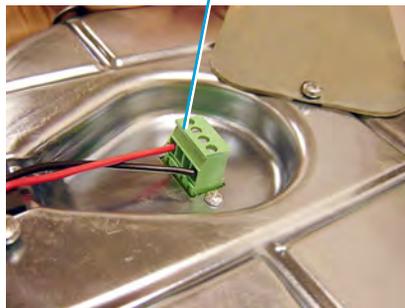
Cover/strain relief plate swiveled into closed position and secured to clamp the cable firmly. Note the half-inch (12.5 mm) knock-out in the cover that may be used for conduit.



Built-in cable strain relief

Figure 20. Non-conduit guided wiring to can and wire restraint
(Only use this method when permitted by applicable building and electrical codes!)

Note: *All electrical installation connections for loudspeaker lines are subject to all applicable governmental building and fire codes. The selection of appropriate electrical hardware to interface with the Distributed Design Series loudspeaker lies solely with the installation professional. Community recommends that an appropriately licensed engineer, electrician, or other professional identify and select the appropriate conduit, fittings, wire, etc. for the installation.*

Internal wiring between terminal block and plug-in connector to loudspeaker (factory wired). Red arrows point to the jumpers between the pairs of (+) and (-) terminals in the highlighted area of this image.
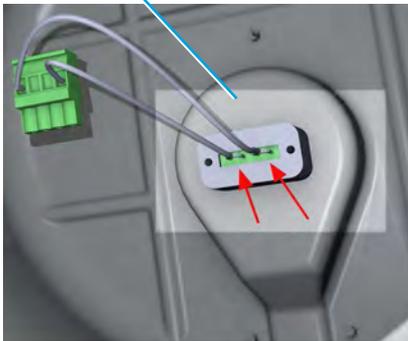
View of 6.5" loudspeaker showing the location of the socket for the wiring connector from the back can.
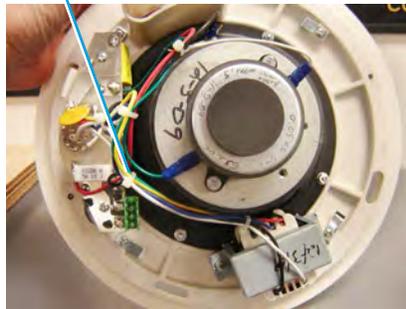
Close-up view of socket for the wiring connector from the back can.
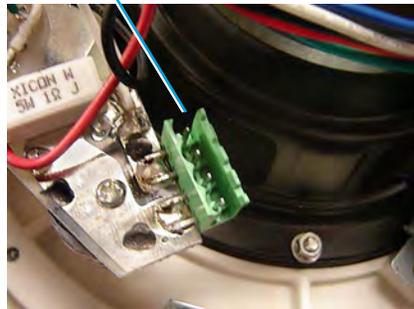
Connect the plug from the can (or from the conduit wiring, see Figure 22) to this socket on the loudspeaker assembly.
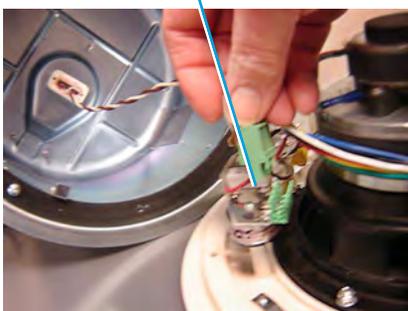
The loudspeaker is now connected to the wires from the can and is ready to mount in the can.
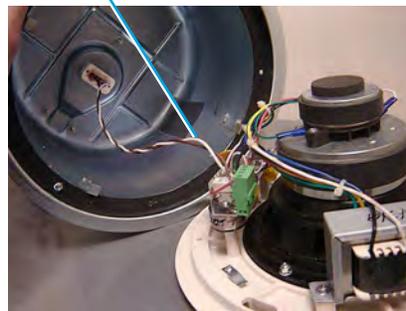
Note: *It should be obvious that in these photos the loudspeaker and can are not in place in a ceiling, but instead are arranged for photographic convenience.*

Figure 21. Internal wiring between can terminal block and loudspeaker

Installation of conduit to the back can

Required tools:

- One hammer and knockout punch tool
- One step-bit for adjusting knockout diameter (optional)
- Safety glasses, gloves and other personal safety gear are recommended as this process involves striking metal parts and chipping away debris around the knockouts.

1. All Distributed Design Series loudspeaker back cans have dual-diameter knockout strain relief fittings on each side. These fittings each measure:
- 21/32" (17mm) to accommodate 3/4" (19 mm) fittings
- 15/16" (24 mm) to accommodate 1" fittings

- Additionally, the top cover has a 3/4" (19 mm) knock-out.

2. The knockout strain relief ports are opened with a hammer and punch using the same techniques for removing knockouts in standard electrical boxes. A step-bit can be used to modify the diameter of the hole to accommodate larger conduit sizes.

3. Insert appropriate fittings and tighten sufficiently for wire path concealment and strain relief, in accordance with applicable codes.

4. You can use flexible or rigid conduit (if permitted by local electrical codes).

Conduit fitted to one side of the can (an additional knockout strain relief on the opposite side of the can allows the connection wiring to be carried through to subsequent cans)

Conduit fitted to the top cover plate of the can, which has a knockout strain relief for this purpose

Figure 22. Conduit for protected wiring to can

When you use conduit to bring wires to the side port(s) of the back can, you can loosen the screws in the green plug to remove the factory-installed wires from the internal terminal block jumpers (see Figure 22), then insert wires from the conduit(s) and tighten the screws. In any case, the rest of the wiring details are the same as shown in Figure 21.
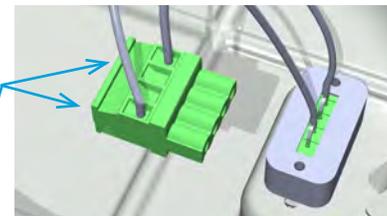
Figure 23. Redeploying the plug for wires entering from conduit
(Loosen clamping screws to remove wires)

Installing the Back Can in the Ceiling

General

Lay out the loudspeaker locations according to the requirements of the specific installation and in compliance with applicable safety and building codes. It is beyond the scope of this manual to provide guidance in this area. Community does, however, offer our *Forecaster* ceiling system software to assist you in distributed loudspeaker system design. Please visit the Product Selection area of Community website for this software.

We also encourage you to use the provided seismic safety tabs to secure the back cans to the building structure. Again, please be guided by applicable building codes here; we cannot provide detailed rigging instructions due to the wide global variations in such codes and practices.

Procedure (for suspended ceiling)

Note: The optimum situation for installation is into a ceiling where the suspension grid is installed and the tiles have not yet been placed. We designed this series to facilitate installation into an already-placed ceiling, and we are writing the instructions to conform to this more restrictive condition. So when we say something like, "pass the tile bridge support rails through the can cutout," and the adjacent space is unobstructed, of course you should feel free to use the more sensible alternative and just drop the rails into place.

1. Mark the hole location on the ceiling tiles and, using the cutout template provided with your Distributed Design Series loudspeakers, cut a hole to the precise size. See Figure 24.

2. Insert the bridge support rails through the can cutout and position them across the rails on either side of the cutout, approximately as far apart as the clips on the C-ring support plate. See Figure 25.

Note: The bridge support rails each have a raised rib with a flat stabilizing flange on one side which keeps the rail from tipping toward the loudspeaker it is supporting. For this reason, be sure to place the rails so that these stabilizing flanges are facing inward toward the cutout.
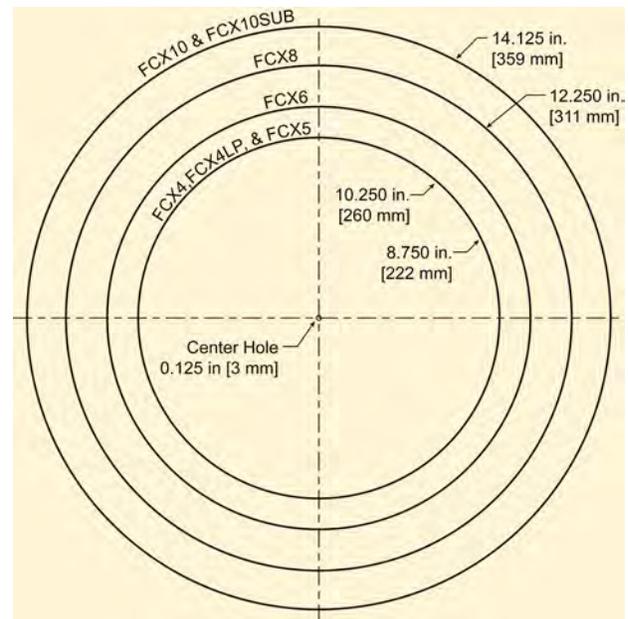
Figure 24. Cutout template dimensions

3. Guide the C-ring support plate through the cutout hole and position it centered in the hole and aligned so its attachment clips are closest to the tile bridges you just placed. Slide these bridges as necessary so the C-ring clips can be pressed onto the raised rail ribs, and now snap the C-ring clips onto the rails. See Figure 25.
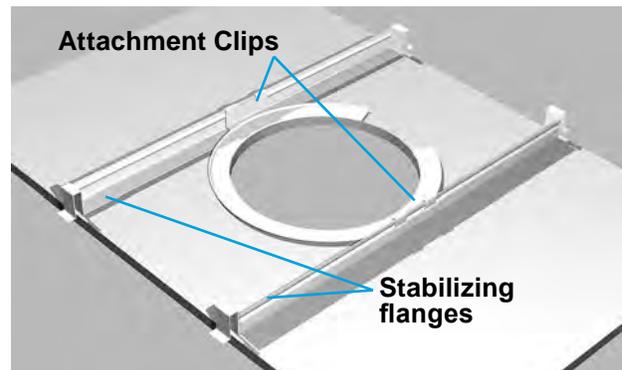

Figure 25. Installing a C-Ring support plate onto tile bridge support rails

4. Slide the back can into the hole, aligning it so that its input terminal block OR its knockout strain relief locations are consistent with the wiring distribution you have mapped out. When you press the can fully into place, the four spring-loaded *Drop-Stop™* tabs will spread atop the C-ring, and you may hear them "snap" into position; you can now continue without having to hold the can in place. See Figure 26.
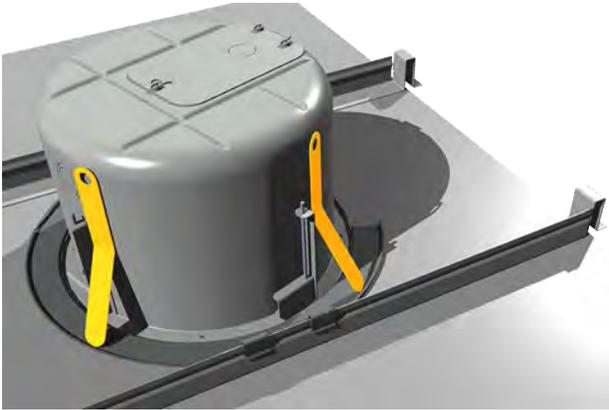
Figure 26. *Drop-Stop™* tabs (highlighted) snap out over C-Ring support
(Temporarily holds can in place even before you secure it with the steel mounting clamps)

Rotate the back can as necessary to ensure all of the clamps are oriented to contact and compress the C-Ring to the ceiling tile during step five as follows.

Note: If you're using loose wires, rather than conduit, it makes sense to first connect the wires to the terminal block atop the can, and secure them with the top cover/ strain relief, before installing the can through the cutout and into place in the C-Ring.

5. Locate the four Phillips-head can clamp actuators around the perimeter of the back can's front flange (see Figure 27). Using a #2 Phillips screwdriver twist each actuator clockwise until you feel resistance as the can clamp presses against the ceiling.
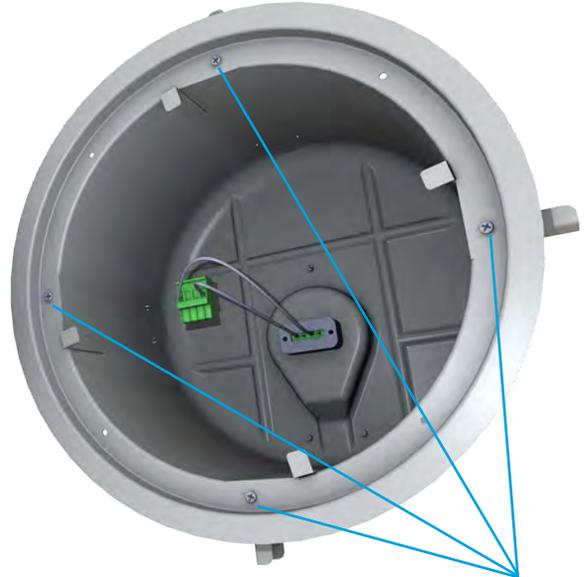
Figure 27. Turning the can clamp actuators clockwise securely locks the back can into the ceiling.

6. This concludes a single back can installation for a standard suspended ceiling. Repeat for as many loudspeakers as you need to install.

Refer to page 28 for instructions on installing the loudspeaker into the back can.

Dry-Wall Ceiling Installation

There are four basic ways to install a Community Distributed Series loudspeaker assembly into a *drywall* ceiling (a.k.a. *sheet rock* or *gypsum board*). Some are for new construction, others for retrofit to existing construction. We recommend some methods over others and of course the choice is yours.

***A. The preferred method for new installations*** is to use the optional New Construction Bracket, pre-installing it directly to the supporting beams before the sheet rock is applied. Multiple small holes on wings to either side of the main cutout hole allow the installer to use screws or nails to secure the ring to the straddling beams. See the following subsection for step-by-step details and variations.

B. An alternative method for new installations – where the ceiling has already been completed – is to use the C-Ring Support Plate along with the Tile Bridge Support Rails. While there are in fact not going to be truss members across which the rails fit, nonetheless they will distribute the weight of the loudspeaker assembly across a greater area than the C-Ring Adapter alone and will thus avoid sagging that might otherwise occur over time. You can cut the hole using the provided template or using a New Construction Bracket as a cutting guide, even though this bracket won't be used for anything else. It's then easy to pass the Tile Bridge Support Rails through the cutout and snap the C-Ring Support Plate on top of them. Refer to Figure 25 on page 23 and to Figure 28.
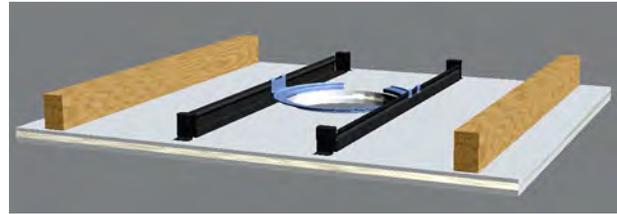
Figure 28. New installation in an existing drywall ceiling
Use the Tile Bridge Support Rails
and C-Ring Support Plate.

C. Retrofit a Distributed Series Loudspeaker (driver/face plate without back can) into an existing back can using a corresponding Distributed Series *Face Adapter Ring*.

D. Retrofit an entire Community Distributed Series Loudspeaker Assembly (including back can) into an existing back can using a corresponding Distributed Series *Can Adapter Ring*.

Note: If you are retrofitting a new loudspeaker alone, without back can, into an existing low-profile back can for a 4.5" competitor's model (minimum 3.5" / 89 mm deep), you can use the D4-FO loudspeaker alone, but if you wish to drop an entire Loudspeaker Assembly into an existing 4.5" can, use the D4LP (with Can Adapter/ Trim Ring). While the latter includes a shallow back can, both the D4 and D4LP use the same D4-FO loudspeaker which has a shallow depth.

Note*: We do not offer a Face Adapter Ring for our larger model loudspeakers.*

Details for Pre-Installation in a New Drywall Ceiling

Optional New Construction Brackets are available for installing loudspeakers in new construction before drywall or plaster is put in place. See Figure 29, and refer to the chart on page 11 for sizes and model numbers.
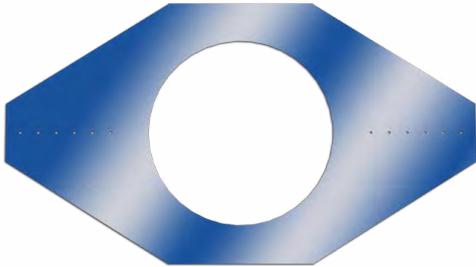
Figure 29. New construction bracket for drywall or lath-and-plaster installations

The New Construction Brackets support the loudspeakers in plaster/dry wall ceilings. Multiple holes in the bracket's two "ears" permit convenient attachment to nearby ceiling beams. The drywall typically is cut with a router-type tool, in which case the bracket central hole will serve as a cutout guide for the router bit.

Inserting the Loudspeaker Assembly into the Back Can

1. Bring the wiring from the ceiling to the top of the can and attach it to the terminal block (see the next Section of this manual for details). Secure the wiring with the top plate/strain relief clamp.

2. Slide the back can into the hole. When you press the can fully into place, the four *Drop-Stop* installation assist tabs will spread atop the C-ring, and you may hear them "snap" into position; you can now continue without having to hold the back can in place. The illustration in Figure 26 on page 24 shows how the *Drop-Stop* tabs work, and is equally applicable with C-Ring Support Plate or New Construction Bracket installations in drywall ceilings.

3. Locate the four Phillips-head can clamp actuators around the perimeter of the back can's front flange, and using a #2 Phillips screwdriver twist each actuator clockwise until you feel tension as the clamps securely lock the back can to the ceiling (refer to Figure 27 on page 24). The back cans leave the Community factory with these clamps fully open (so that approximately 1.5" / 38 mm thick ceilings can be accommodated).

> ⚠️ **Note***. If you are thinking of using the Can Adapter/Trim Ring to fit a complete Community Loudspeaker Assembly into an existing oversize ceiling hole, PLEASE DO NOT!* **We do not recommend this practice.** *The loudspeaker has minimal support and is more apt to cause the ceiling to sag. Also, this almost certainly would not satisfy seismic codes if any such codes are applicable.*

Painting the Loudspeaker

The loudspeakers' textured white finish complements most decors and does not require further painting. However, if the interior design requires a custom loudspeaker finish, these loudspeakers are easy to paint.

It's best to paint the baffle before installation. In cases where it needs to be finished along with the ceiling, the loudspeaker baffle can be painted after mounting in the ceiling.

Note: *The paint masks provided by Community are intended to PREVENT the loudspeakers from receiving any paint.*

Type of Paint

The loudspeaker's ABS plastic baffle accepts almost any type of latex or oil based paint. We recommend application of two coats.

Painting Process

Follow this procedure to obtain the best results:

1. Clean the baffle with a light solvent such as mineral spirits, rubbing the baffle with a lightly dampened cloth. **Do not** use abrasives such as sandpaper or steel wool.

CAUTION: Use only light mineral spirits thinner as a cleaner. NEVER use gasoline, kerosene, acetone, methyl ethyl ketone (MEK), paint thinner, harsh detergents or other chemicals. These chemicals and agents may permanently damage the loudspeaker and some are also toxic and highly flammable.

2. Mask the loudspeaker so that the surround, cone and center area will not receive any paint. If the loudspeaker is already in the ceiling, you may wish to mask the ceiling as well. Use a low-tack painter's tape (typically blue in color) to avoid damaging the loudspeaker surround when the tape is removed. We advise against using conventional masking tape and NEVER use duct tape in this application; these kinds of tape generally leave adhesive residue that can be difficult to remove and that may actually cause damage.

3. After cleaning, apply two or more two thin coats of either latex or oil-based paints. Latex paint will adhere better if an oil-based primer is used first. Apply the paint with a roller or brush, or spray it on.

4. The grille should be painted separately, and when it is **not** in place on the loudspeaker. We further recommend that you remove the grille's internal cloth mesh, then spray paint the grille assembly. Avoid using a roller or brush to paint the grille as its metal perforated holes may become clogged with paint, which degrades sound quality and also may attenuate the sound. Reinstall the internal cloth mesh (or if damaged install a new cloth mesh).

Secure the Loudspeaker In the Back Can

When you have made the electrical connections from the wires coming into the can to the loudspeaker then you can mount that loudspeaker into the can.

1. Four *Twist-Assist*™ face tabs protrude just inside the can opening. Align the four slots along the periphery of the loudspeaker face with the Phillips-head can clamp actuators. The actuators should be positioned so that they are at the far right of the slots (viewed through the slot from the front of the loudspeaker).

2. Twist the loudspeaker clockwise a few degrees so the *Twist-Assist*™ face tabs are positioned at the left of the face slots as you look at the front face (see Figures 30 and 31).

3. Four 4mm sheet metal screws come from the factory partially inserted into the plastic face. Use a screwdriver to install these captive screws into the can. Tighten so they are snug against the face, but do not over-tighten them. See Figure 32.

Note: Some codes now require that the grille have a safety cable; your local codes may vary. In any case, Community makes it easy to comply with an included security cable system, as detailed in Steps 4 through 6.

Align slots in face over clamp actuators   **Position of actuators with face locked**

Figure 30. Initial position (left) and loudspeaker face twisted to lock (right)

Twist face to lock   **Allows tabs to mate in can.**   **Align screw to slot (Qty 4)**

**Figure 31. Four *Twist-Assist*™ face tabs inside the back can instantly secure the loudspeaker to the back can with a twist.**

Back Can

Face   **Grille**   **Captive 4mm sheet metal screw (4)**

Figure 32. Use the four included, captive, 4mm sheet metal screws to secure the loudspeaker into the can.
Use the screws after inserting loudspeaker into the back can and twisting to retain it.

4. Once the loudspeaker is secured in the back can, you can attach the safety cable between the grille and loudspeaker. There is a nylon mono filament loop attached to the grille and looped through a metal clip. Another mono filament line is located inside the bass reflex port of the face of the loudspeaker. Use the metal clip to link these two mono filament loops. See Figure 33.

5. Carefully lower the grille until the cable holds it, and let go. It should hang harmlessly from the mono filament line.

6. If you're proceeding with setup, you can leave the grille hanging so you can adjust the power setting as noted on the next page. Otherwise, snap the grille into position on the face of the loudspeaker baffle.
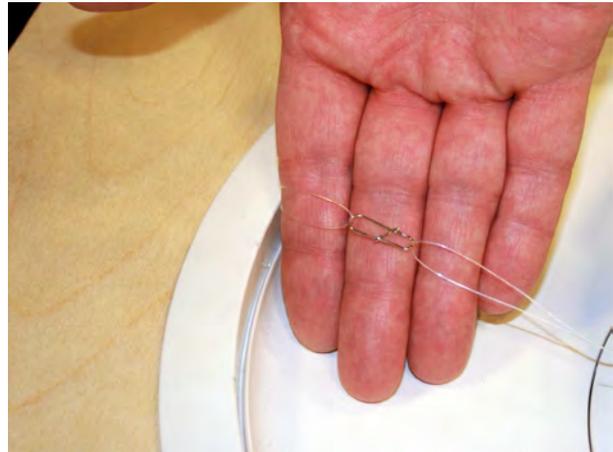
Figure 33. Grille safety clip and line (left) should look like this (right) when attached.

Loudspeaker Tap Setting

You can use a standard #2 or #3 Phillips or a medium slot-blade screwdriver such (not the one provided with the loudspeaker kit), or just press with your thumb firmly, and twist to adjust the power control dial on the front face of the loudspeaker baffle. As shown in Figure 34, you can make any of five different settings, although the dial has dual calibrations so at first glance it appears to have ten settings. The 8-ohm position is the same on both sides and is for a low impedance connection. On the left side of Figure 34's closeup detail view are the power values for 100-volt connections, and on the right side the power values for 70-volt connections. (The actual power values on this dial will vary with the model of loudspeaker installed.)

⚠️ *Note: The letters NC mean "no-connect" but they do not actually break a connection. DO NOT USE this setting if you're using a 100-volt distribution scheme as the loudspeaker may draw excessive power; it corresponds to the highest power that can be drawn with a 70-volt source.*

This control makes it very easy and fast to balance an installation since there is no need to drop the loudspeakers out of their back cans and move wires to different terminals.

Face-mounted, screwdriver-adjustable loudspeaker power / voltage setting dial.

Enhanced detail of typical adjustor dial (Available settings vary with model.)
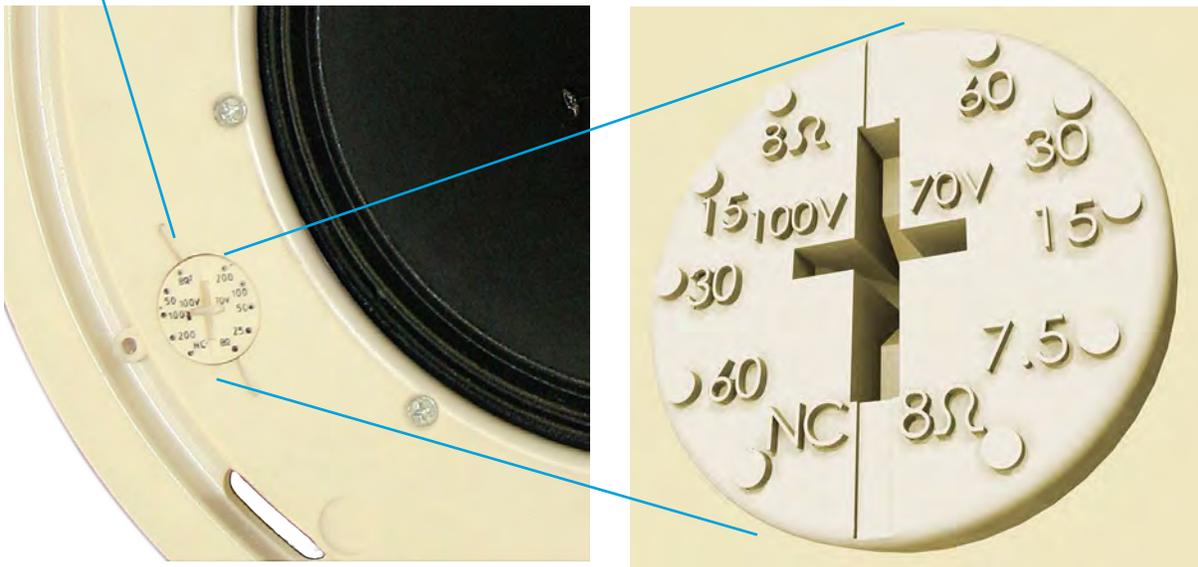
Figure 34. Setting Loudspeaker Tap

Warranty Information and Service

TRANSFERABLE WARRANTY "(LIMITED)" - VALID IN THE USA ONLY

The Distributed Design Ceiling Loudspeaker Systems are designed and backed by Community Professional Loudspeakers. For complete warranty information within the USA please refer to the Warranty Card enclosed with the product, or the website: www.communitypro.com/warranty. Please call 610-876-3400 to locate your nearest Authorized Field Service Station.

For Factory Service call 610-876-3400. You must obtain a Return Authorization (R/A) number prior to the return of your product for factory service.

WARRANTY INFORMATION AND SERVICE FOR COUNTRIES OTHER THAN THE USA

To obtain specific warranty information and available service locations for countries other than the United States of America, contact the authorized Community Distributor for your specific country or region.

SHIPPING DAMAGE

If the product is damaged during transit you must file a damage claim directly with the freight company. Be sure to save the carton and packing materials, as damage claims can be denied if these materials are not retained. If evidence of physical damage exists upon arrival, be cautious before signing a delivery acceptance receipt. Often, the fine print will waive your right to file a claim for damage or loss after you sign it. Make sure that the number of cartons shown on the freight documents have actually been delivered.

FIND THE LATEST ONLINE

The latest version of this manual and the most recent product information is always available at www.communitypro.com.

NOTES

For a copy of the complete warranty statement, visit www.communitypro.com/warranty

Please register your product online at www.communitypro.com/productregistration

Community Professional Loudspeakers
333 East Fifth Street, Chester, PA 19013-4511 USA
Tel: (610) 876-3400 • Fax: (610)874-0190
community**pro**.com

7JAN2014