

#### Benefits

- **All-in-one package includes an aluminum trim ring/grille** (is also compatible with 8" grilles & backboxes - order separately).
- **Fits into a 4"D backbox or no backbox.**
- **Clear and loud paging/music with superior aesthetics.**
- **Installs using clamps or screws into new or retrofit areas.**
- **Has vandal-resistant grille options.**
- **Features dual capacitor circuitry for standard paging or supervised use.**
- **Easy 2-wire hook-up to rear access cable clamp.**
- **Front and rear accessible transformer selection switch.**
- **Weather-resistant assembly for indoor or outdoor use.**
- **Integral seismic tie-off brackets.**

#### Description

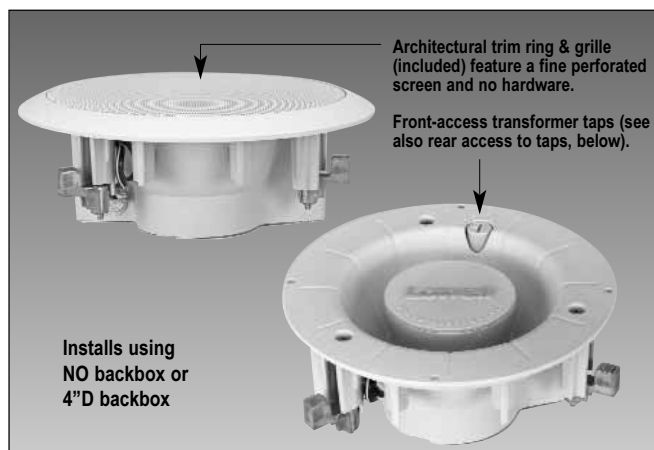
**UNIHORN™** Model LUH-15T is a compact 15W universal use re-entrant horn that mounts into 4"D spaces to provide clear intelligibility with high SPL output over the extended vocal range. The ready-to-install package includes a self-contained aluminum housing with moisture-seal cover, contoured aluminum trim ring and press-fit aluminum grille with no visible hardware. The horn is engineered for labor-saving installation in brick, concrete block, plaster, drywall and acoustic tile. It mounts indoors or out, using adjustable clamps or screws. It installs with or without a 4"D backbox in recessed or surface applications and provides a finished appearance using the factory mounted trim ring and fine perforated grille included. Although a grille is supplied, the **UNIHORN™** will accept a standard 8" screw-mount speaker grille and backbox if desired (see page 4). Simple 2-wire hook up, dual capacitor circuitry, and 105dB SPL (1W1M) make this horn ideal for standard or supervised paging/signaling applications. Connections are secured through a rear metal clamp and the 25/70V transformer is screwdriver adjustable on the front and rear. Finish is Network Grey powder epoxy. Weight is 6 lbs.

#### Trim Ring and Grille (supplied)

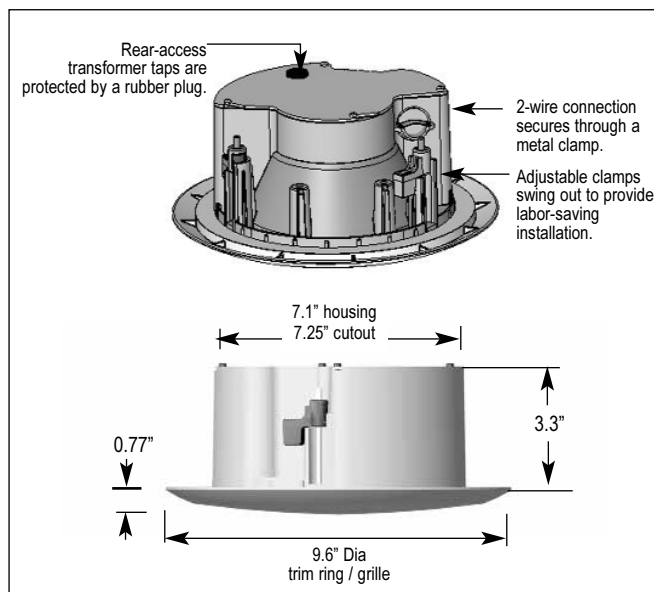
The **UNIHORN™** is packaged with its own trim ring and small profile grille for universal indoor and outdoor architectural appeal. The trim ring and grille are not required, but provide a superior cosmetic solution for mounting horns in new and retrofit installations. The cast aluminum trim ring (shipped mounted to the horn) is engineered to snugly fit the fine perforated aluminum screen grille which press fits without screws for a hardware-free appearance. Finish is neutral network grey to match the **UNIHORN™**. *Note: the trim ring also serves as a cut-out template.*

#### Optional Mounting Accessories

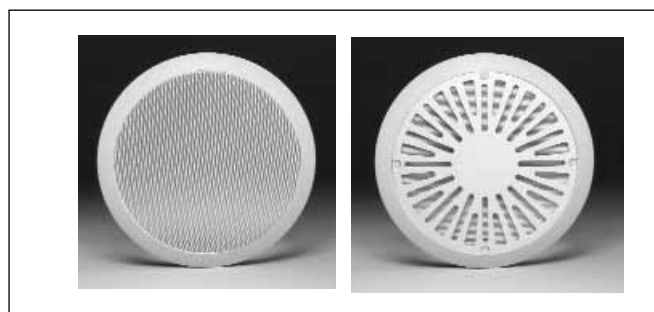
The **UNIHORN™** is engineered for versatile recessed or surface use in nearly any application. See page 4 for a detailed overview of system-specific accessories and 8" speaker mounting accessories. System-specific accessories include the vandal-resistant grille Model **LUH-VRG** that is cast aluminum with stainless steel screen; all-in-one surface-recessed backbox Model **LUH-BOX** which is stainless steel with side knockouts and a universal rear mounting pattern. Model **LUH-TP** is a beveled edge aluminum trim plate designed to overlap **LUH-BOX** and the rough-in opening when it is used in recessed applications (required). Both are finished in Network Grey powder epoxy.



**UNIHORN™ LUH-15T - 15W 70/25V Package**  
Ready-to-install system features trim ring and press-fit aluminum grille.



**Compact Aluminum Assembly installs using clamps or mounts conventionally to 8" speaker grilles & backboxes** provides for simple and fast installation in 4"D indoor/outdoor spaces.



**Supplied Architectural Trim Ring / Grille** with No Visible Hardware (9.6" Dia.).  
**Optional Vandal-resistant grille LUH-VRG** Cast aluminum with stainless steel screen (Shown with trim ring supplied with horn)  
Horn may also be mounted without trim ring/grille or with an 8" speaker grille (see p. 4).



# LUH-15T UNIHORN™

## 15W Universal Use Horn Package and Companion Accessories

A  
U  
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O

12"/10"  
Speakers &  
Accessories

8"  
Speakers &  
Accessories

6"  
Speakers &  
Accessories

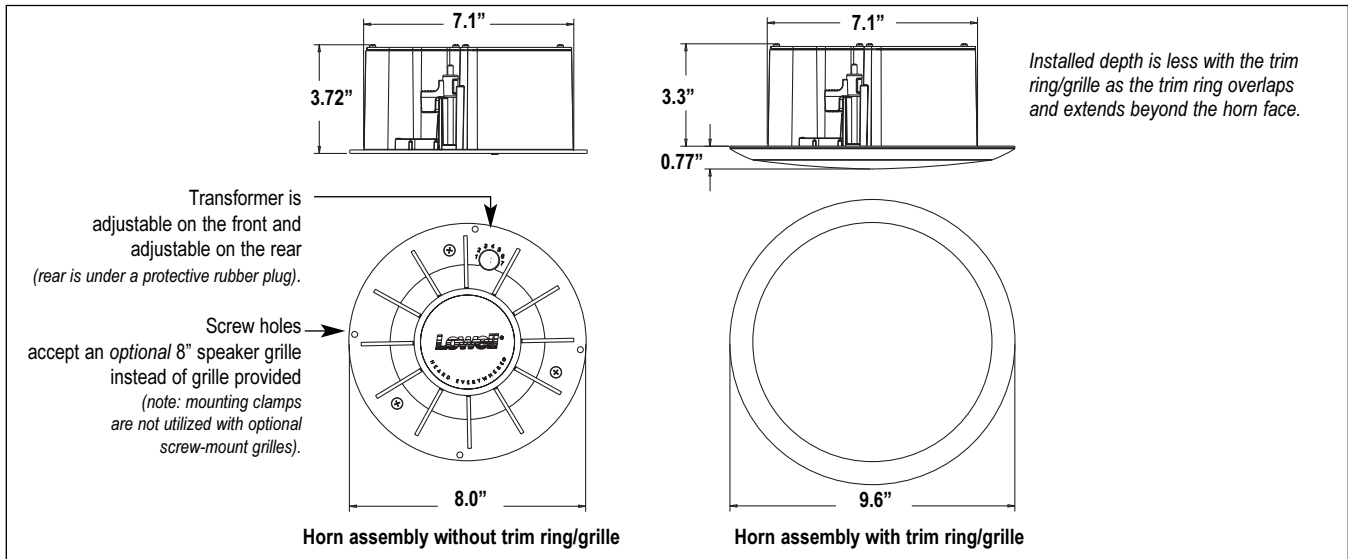
4"  
Speakers &  
Accessories



Masking  
Speakers &  
Generators

Control  
Accessories  
& Electronics

Re-entrant  
Horns



### Specifications: Lowell UNIHORN™ Model LUH-15T Universal Use Re-entrant Horn

#### PERFORMANCE

Power Handling, Nominal	15 watts RMS (nominal) measured per EIA Standard RS 426-B
Sensitivity	110dB SPL (peak) 1W/1M, 105dB SPL (avg) 1W/1M
Frequency Response	600Hz-12kHz (nominal), 740Hz-7.4kHz (±6dB)
Dispersion Angle	80° @ 2000Hz octave (-6dB)
Impedance	5000, 2500, 1300, 666, 333, 89, 45 ohms
Transformer Taps	25V @ .48, .94, 1.8, 7.5, 15W; 70V @ .9, 1.8, 3.8, 7.5, 15W (adjustable front and rear. Rear features a rubber plug)
Capacitor	DC blocking series connected (10 uf NP)

#### PHYSICAL

Outside Size (horn housing)	7.1" (180mm) Dia. housing with 8" (203mm) Dia. face x 3.72" (94mm)D
Outside Size (horn with trim ring/grille)	7.1" (180mm) Dia. housing with 9.6" (244mm) Dia. trim ring/grille x 3.3" (84mm) D x .772" (19mm) Projection
Housing Material	Cast aluminum with gasketed rear cover
Trim Ring / Grille Material	Cast aluminum / perforated aluminum
Mounting Bolt Circle	7.625 inch (194mm) with 4 holes spaced to mount an E.I.A. 8" speaker grille.
Cutout Diameter	7.25 inch (184mm)
Net Weight	6 lbs (2.72kg)

### Scope of Lowell Model LUH-15T performance and power tests

Lowell loudspeakers are thoroughly tested to provide specifiers and contractors with solid data that accurately reflects the performance of production drivers. Performance tests are conducted on randomly selected final production assemblies. Testing equipment includes the GoldLine TEF-20 analyzer and a LinearX LMS measurement system.

Frequency Response data is provided in two ways: *Nominal* - which is the generally usable response range and *Limited Bandwidth* - (defined by ± \_\_\_dB) which is useful in predictive engineering calculations.

Sensitivity (SPL) is presented two ways: *Peak* - used by many manufac-

turers (and presented here for comparison purposes) is a rating based on a narrow portion of the frequency response curve, and *Average* - which is a computer calculation of the octave-weighted average over the entire engineering bandwidth as shown in the frequency response (± \_\_\_dB). Dispersion Angle is defined as the angle of coverage that is no more than 6dB down from the on-axis value averaged over the 2000 Hz octave band. Since speech intelligibility is very dependent upon the 2000 Hz octave, this specification is quite useful in designing paging systems that provide even coverage and intelligibility.

### A & E Specifications

The re-entrant horn loudspeaker shall be Lowell Model LUH-15T. It shall be a self-contained compression driver within an aluminum weather-resistant housing that may be installed into 4"D spaces. Power rating shall be 15 watts continuous. Frequency response shall be 740Hz-7.4kHz (±6dB). Sound pressure level shall be 105dB (1W/1M), 110dB peak. Dispersion shall be 80 degrees @2000Hz (-6dB). The unit shall include a 70/25V transformer with taps selectable on the front and rear of the horn. The horn shall include a connected DC blocking capacitor (10 uf NP) for supervised system applications but will ship ready for standard two-wire connection with cable exiting through a rear cable clamp. The horn housing shall be 7.1"Dia. at its widest measure with an 8" dia. flat face. The horn assembly shall include an aluminum trim ring/grille that is 9.6" dia. with no visible hardware and

neutral grey finish to match the horn. The assembly shall mount using (3) screw-driver activated clamps that are adjustable for depths of 0-1.5" or 1-2.125" or may be mounted using (4) screws (by others).

#### Optional Accessories

The horn Model LUH-15T, using supplied trim ring/grille or optional vandal-resistant grille Model LUH-VRG, shall clamp mount to recess/surface backbox Model LUH-BOX. For recessed applications trim plate Model LUH-TP shall also be specified. For acoustic tile applications tile bridge Model LUH-TBAR shall be specified.

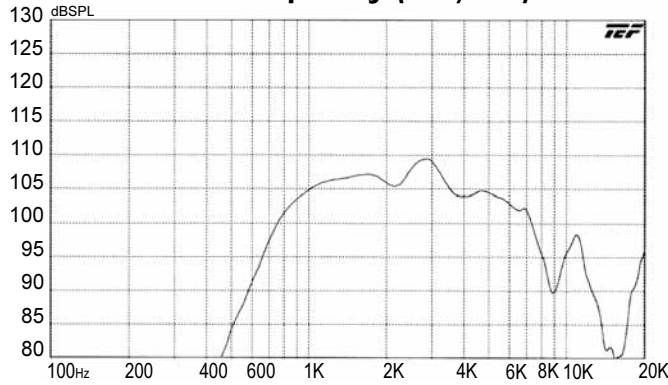
The horn Model LUH-15T, not using supplied trim ring/grille, shall screw mount 8" speaker grille Model \_\_\_\_\_ and mount to recess backbox Model \_\_\_\_\_ or surface backbox Model \_\_\_\_\_.



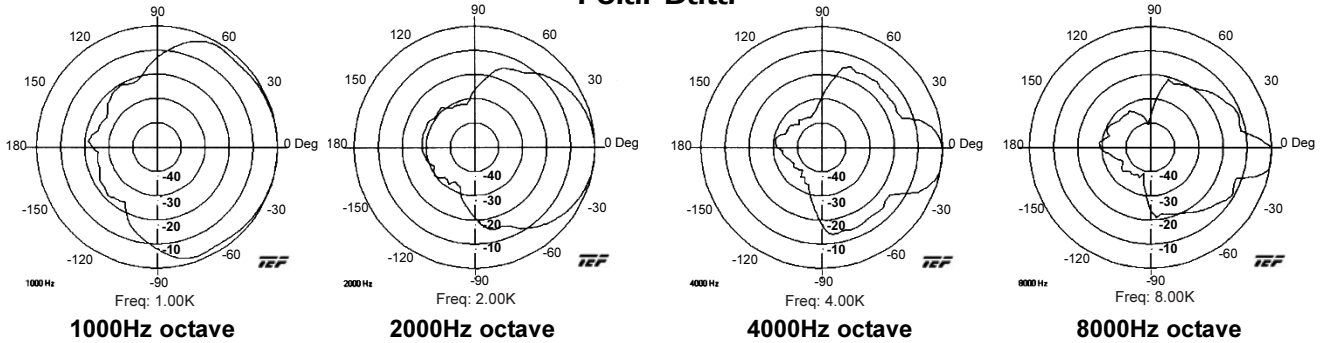
# LUH-15T UNIHORN™

15W Universal Use Horn Package and Companion Accessories

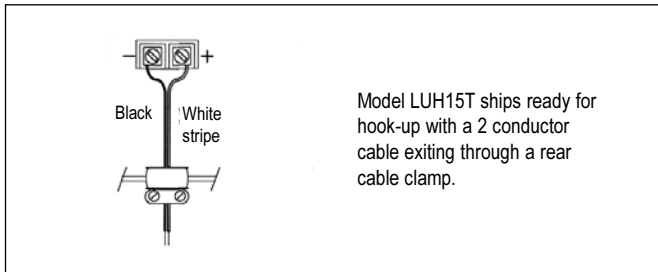
## SPL vs. Frequency (1W/1M)



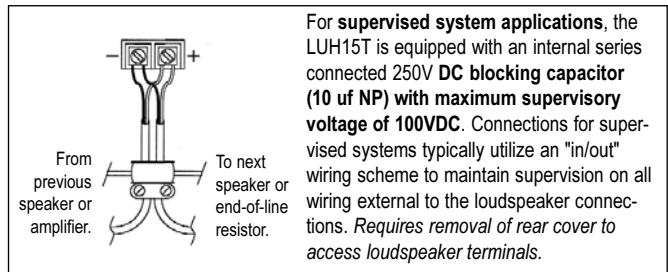
### Polar Data



### Connections

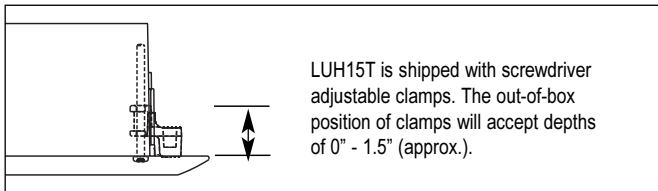


As supplied from factory.

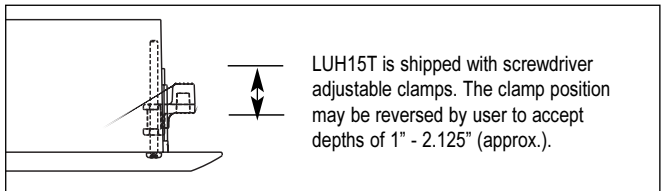


Typical in/out wiring hook-up to maintain supervised system integrity.

### Mounting Clamp Operation



Clamps (as shipped) adjust for 0" - 1.5" install depth.



Clamps (shown reversed) adjust for 1" - 2.125" install depth.

### Transformer Settings



Transformer adjustment from the front.

Switch Position	Impedance (ohms)	Switch setting wattage	70V	25V
1	2500	1	not used	-
2	2500	2	not used	-
3	1300	0.9	0.66	0.48
4	666	1.8	1.32	0.96
5	333	3.6	2.64	1.92
6	89	not used	7.2	5.28
7	45	not used	15	10.56

Transformer adjustment from the rear (under rubber plug).

Switch Position	Impedance	Watts @70V	SPL@10ft 70V	Watts @25V	SPL@10ft 25V
1	5000	0.9	90dB** / 94dB***	Not used	-
2	2500	1.8	94dB** / 97dB***	Not used	-
3	1300	3.6	97dB** / 100dB***	0.48	86dB** / 91dB***
4	666	7.2	100dB** / 103dB***	0.94	91dB** / 94dB***
5	333	14.4	101dB** / 106dB***	1.8	93dB** / 97dB***
6	89	Do NOT use*	-	7.5	99dB** / 102dB***
7	45	Do NOT use*	-	15	100dB** / 105dB***

\* Note switch positions 6 and 7 are NOT used on 70V applications. They exceed the capacity of the driver and transformer and could damage or destroy the driver and/or amplifier.

\*\* UL measured A weighted reverberant room sound power output.

\*\*\* 3dB increment rating with a sweep sine-wave signal source - flat weight SPL meter.

## INSTALLATION OPTIONS

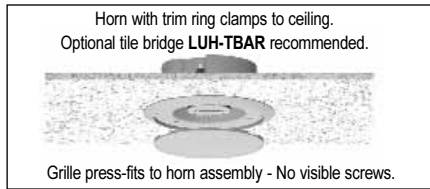
The **UNI HORN™** weather-resistant housing with supplied trim ring/grille requires no mounting accessories for many installations. Shown below are **OPTIONAL** accessories to meet a wide range of applications. The **UNI HORN™** accessories for clamp-mounting are manufactured of stainless steel or aluminum to withstand corrosive environments and to reduce installation time while providing an aesthetically superior solution to conventional installation to an 8" speaker grille. The ability to use an 8" speaker grille is offered for those who want to install the horn as they have in the past.



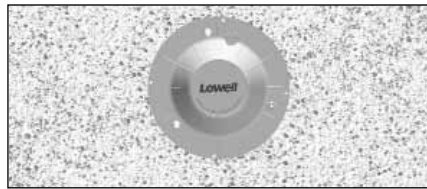
**LUH-15T UNI HORN™**

(continued)

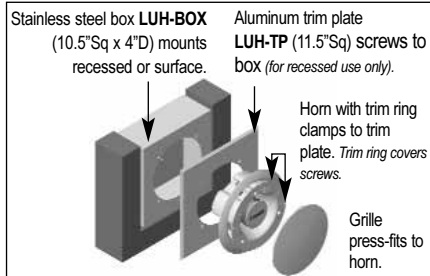
### Recessed Installations



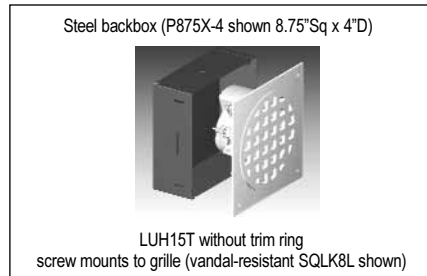
**Recessed without backbox - Clamp mount**  
using trim ring/grille supplied.



**Recessed without backbox - Clamp mount**  
NOT using trim ring/grille supplied.

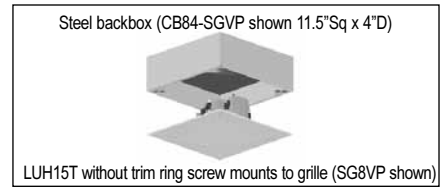


**Recessed with stainless steel backbox - Clamp mount**  
LUH-BOX + Trimplate LUH-TP and trim ring/grille supplied.

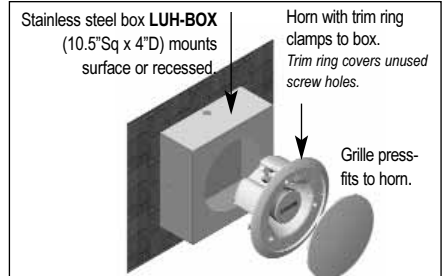


**Recessed with steel backbox - Screw mount**  
Model P875X, P68X, CP84 or XCP84 and 8" screw-on grille.

### Surface Installations



**Surface with steel backbox - Screw mount**  
Model CB84 or CB84-SGVP and 8" screw-mount grille.



**Surface with stainless steel backbox - Clamp mount**  
Model LUH-BOX and trim ring/grille supplied.

### UNI HORN™ Installation Methods/Accessories for clamp-mounting (order accessories separately)

GRILLE	BACKBOX	+	T-BRIDGE / RAILS
No Grille (Horn without Trim Ring/Grille supplied)	No backbox.....		LUH-TBAR (recommended for acoustic tile ceilings)
Trim Ring/Grille Supplied with Horn (alum) 9.6" Dia.	LUH-BOX (recessed) + LUH-TP trim plate.....		N.A.
	LUHBOX (surface).....		N.A.
LUH-VRG (vandal-resist grille mounts trim ring supplied with horn) (alum) 9.6" Dia.	LUH-BOX (recessed) + LUH-TP trim plate.....		N.A.
	LUHBOX (surface).....		N.A.

### OR UNI HORN™ Installation Methods/Accessories for screw-mount installation to 8" speaker grilles (order accessories separately)

GRILLE	BACKBOX.....	+	T-BRIDGE / RAILS (for acoustic tile)
SQLK8L (vandalproof-alum) 9.5" Sq.	P875X, P875X-4 (recessed).....		SS24 rails
	CB86-4, CB84 (surface).....		N.A.
SG8VP (vandalproof-steel) 11.375" Sq	P68X (recessed).....		SS24 rails
	CB84-SGVP (surface).....		N.A.
WB8 (steel) 12.875" Dia.	CP84 (recessed).....		LBS8-CP
	XCP84 (recessed).....		LBS8-R1
	No backbox.....		LBS8-R1
SG8 (steel) 11.375" Sq.	P68X (recessed).....		SS24 rails
	CB84-SG (surface).....		N.A.
	No backbox.....		LBS8
LCS8 (alum baffle) 10.75" Dia. x 4.25" Proj.	N.A.....		N.A.



Model	Description	Size	Material	Color
<b>Optional UNI HORN™ - accessories for clamp-mounting (see above)</b>				
LUH-VRG	Grille-Vandal resist	9.6 Dia	Cast Alum	Network Grey
LUH-BOX	Backbox-recessed or surface	10.5Sq x 4D	StainlessSteel	Network Grey
LUH-TP	Trim plate for recess LUH-BOX	11.5Sq	Alum	Network Grey
LUH-TBAR	T-bridge for LUH15T	23.75L	Steel	Galvanized
<b>Optional 8" speaker screw-mount accessories - use instead of accessories above.</b>				
SQLK-8L	Grille-Vandal resist	9.5Sq	Cast Alum.	White
SG-8VP	Grille-Vandal resist	11.375Sq	Steel	White
WB-8	Grille	12.875Dia	Steel	White
SG-8	Grille	11.375Sq	Steel	White
LCS-8	Baffle for surface mounting	10.75Dia x 4.25Proj	Spun Alum	Alum.
P875X	Backbox-recessed	8.75Sq x 3.625D	Steel	Black
P875X-4	Backbox-recessed	8.75Sq x 4D	Steel	Black
P68X	Backbox-recessed	10Sq x 4D	Steel	Black
CP84	Backbox-recessed	11.938Dia x 4.063D	Steel	Black
XCP84	Backbox-recessed	10.063Dia x 4.063D	Steel	Black
LBS8	Tbridge 8in	23.75L	Steel	Galvanized
LBS8-R1	Tbridge 8in	23.75L	Steel	Galvanized
LBS8-CP	Tbridge 8in	23.75L	Steel	Galvanized
SS24	Mtg channel rail pr	23.75L	Steel	Galvanized
CB84	Backbox-surface	12.25Sq x 4D	Steel	White
CB84-SG	Backbox-surface	11.5Sq x 4D	Steel	White
CB84-SGVP	Backbox-surface Vandalproof	11.5Sq x 4D	Steel	White
CB86-4	Backbox-surface	9.563" SQ x 4.00"D	Steel	White