

Model: LUH-15T

LOWELL UNIHORN® (15W)

Description

UNIHORN® model LUH-15T is engineered for labor-saving installation in brick, concrete block, plaster, drywall and acoustic tile—indoors or outdoors—in recessed or surface-mount applications. This 15W universal-use re-entrant horn 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. Connections are secured through a rear metal clamp and the 25/70V transformer is screwdriver-adjustable on the front and rear. Simple 2-wire hookup, dual capacitor circuitry, and 105dB SPL (1W1M) make this ideal for standard or supervised paging/signaling in fire alarm emergency warning systems and general voice communication applications. The cast aluminum trim ring is engineered to snugly fit the fine perforated aluminum screen grille which press fits for a hardware-free appearance. Trim ring also serves as template. Network Grey powder epoxy finish.

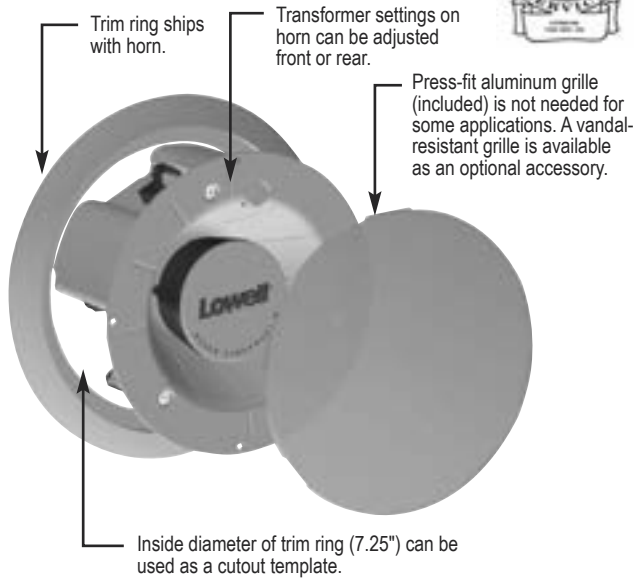
Features:

- Ready-to-install 15W aluminum re-entrant horn with 70V/25V transformer. Includes aluminum trim ring and press-fit aluminum grille.
- Dual-capacitor circuitry for general or supervised paging.
- Weather-resistant housing.
- Mounts with or without the trim ring and press-fit grille (included).
- Installs with clamps or screws in new or retrofit areas, with or without 4"D backbox (order separately).
- Easy 2-wire hookup to rear access cable clamp.
- 25/70V transformer is screwdriver-adjustable on front and rear.
- Will also accept a standard screw-mount grille and/or backbox for 8" speaker (not included).
- The LUH-15T has met or exceeded the requirements of the UL1480 Fifth Edition "Low Temperature Test" and "High Temperature Test" and is capable of operating within an ambient temperature range of -40°F (-40°C) to 151°F (66°C).

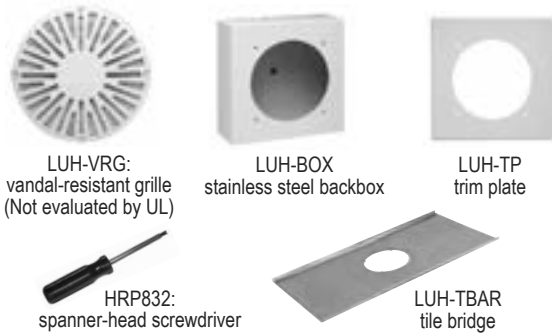
A & E Specifications:

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 can 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 (1W1M) average, 116.8dB SPL (max) 15W/1M calculation based on power rating and measured sensitivity. Dispersion shall be 80 degrees @2000Hz (-6dB). Unit shall include a 70/25V transformer with taps selectable on front and rear of horn. Horn shall include a connected DC blocking capacitor (10 uF NP) for supervised system applications and will ship ready for standard two-wire connection with cable exiting through a rear cable clamp. The housing shall be 7.1" dia. at its widest measure with an 8" dia. flat face. The assembly shall include an aluminum trim ring/grille that is 9.6" dia. with no visible hardware and neutral grey finish. The assembly shall mount using (3) screwdriver activated clamps that are adjustable for depths of 0-1.5" or 1-2.125" or can be mounted using screws (not included). [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.]

Listed for UL1480 Fifth Edition Fire Protective Signaling and UL2043 (suitable for use in a return air plenum space).



Optional Accessories: (order separately)



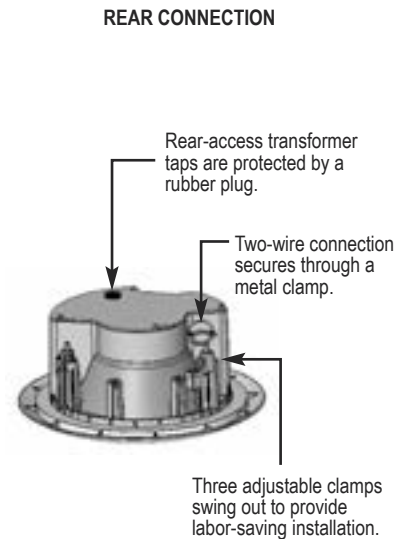
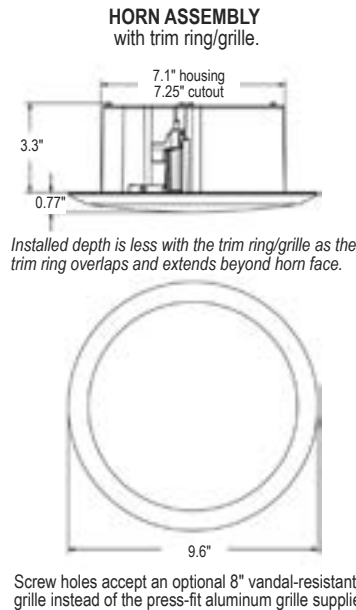
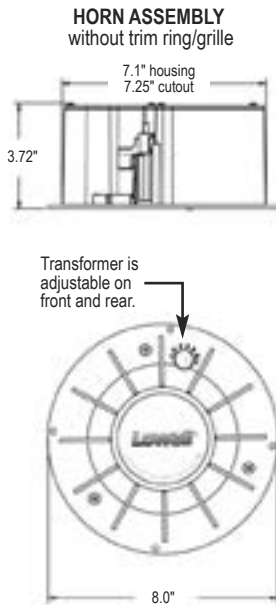
- **LUH-VRG (vandal-resistant grille):** 8.02" dia. cast-aluminum grille with secondary stainless steel barrier screen mounts directly to the 9.6" dia. trim ring with spanner screws. Network grey.
- **HRP832 (spanner-head screwdriver):** for use on 8-32 spanner screws used with vandal-resistant grille.
- **LUH-BOX (backbox):** 10.5" sq. x 4"D stainless steel surface or recessed backbox for extreme environments.
- **LUH-TP (trim plate):** 11.5" sq. trim plate covers rough openings in recessed installations.
- **LUH-TBAR (tile bridge):** distributes weight of horn assembly when installed in acoustic tile ceilings.

Model No.	Description	Size	Weight
LUH-15T	15W UNIHORN®	7.1" rear dia., 8" face dia., 3.72"D, 9.6" dia. grille	6 lbs.
LUH-VRG	Vandal-resistant Grille	8.02"	
HRP-832	Spanner-head Screwdriver	---	
LUH-BOX	Stainless Steel Backbox	10.5" sq. x 4"D	
LUH-TP	Trim Plate	11.5" sq.	
LUH-TBAR	Tile Bridge		

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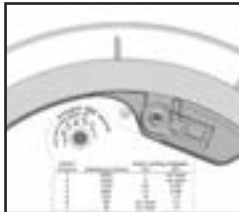




TRANSFORMER Settings:



Transformer adjustment from front.



Transformer adjustment from rear (under rubber plug).

Switch Position	Impedance	Watts@ 70V	SPL@10ft. 70V	Watts@ 25V	SPL @10-ft 25V
1	5000	0.9	94dB*	NOT USED	---
2	2500	1.8	97dB*	NOT USED	---
3	1300	3.8	100dB*	0.48	91dB*
4	666	7.5	103dB*	0.94	94dB*
5	333	15	106dB*	1.8	97dB*
6	89	DO NOT USE**	---	7.5	102dB*
7	45	DO NOT USE**	---	15	105dB*

* 3dB increment rating with a sweep sine-wave signal source 0 flat weight SPL meter.

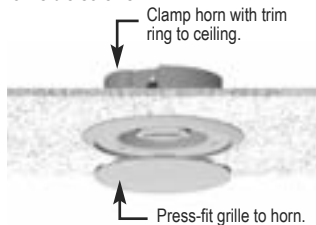
** Note switch positions 6 and 7 ARE NOT USED on 70V applications. They exceed capacity of the driver and transformer and could damage or destroy the driver and/or amplifier.

UL Approved Installation Methods / Accessories:

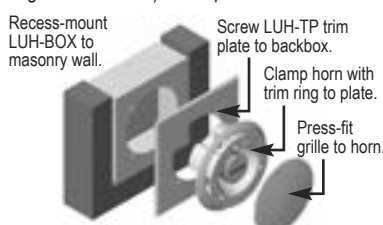
Installation Method	Grille	Backbox / Trim Plate	T-bridge
Open Installation	Press-fit aluminum grille* OR no grille	N/A	N/A
Drywall	Press-fit aluminum grille	No backbox	N/A
Lay-in Tile Ceiling	Press-fit aluminum grille	No backbox	LUH-TBAR**
Masonry	Press-fit aluminum grille	LUH-BOX (recessed) + LUH-TP trim plate	N/A
Surface-mount	Press-fit aluminum grille	LUH-BOX (surface)	N/A

*Tighten dog ears to hold trim ring in place. **T-bridge is recommended for acoustic tile ceilings.

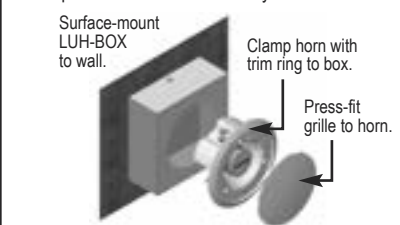
Lay-in Tile Ceiling or Drywall: horn with trim ring clamps to ceiling (tile bridge is recommended for acoustic tile). Grille press-fits to horn assembly. No visible screws.



Masonry: 10.5" sq. x 4"D stainless steel backbox mounts into masonry wall. LUH-TP trim plate screws to backbox. Horn with trim ring clamps to trim plate (trim ring covers screws). Grille press-fits to horn assembly.



Surface-mount: 10.5" sq. x 4"D stainless steel backbox surface-mounts to wall. Horn with trim ring clamps to box (ring covers unused screw holes). Grille press-fits to horn assembly.

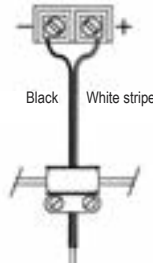


Other Installation Accessories (not evaluated or approved by UL), order separately: the UNIHORN® will also accept the LUH-VRG vandal-resistant grille or any standard 8" speaker grille; however, these options have not been evaluated by UL. The LUH-VRG installs with spanner-head screws and screwdriver. Standard grilles screw-mount to the UNIHORN® and fit various backboxes. See individual product spec sheets for more information on standard 8" speaker grilles and backboxes.

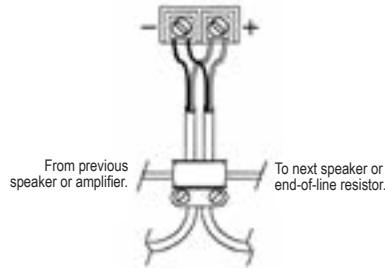
Installation Method	Grille	Backbox / Trim Plate	T-bridge
Open Installation	LUH-VRG vandal-resistant grille* OR no grille	N/A	N/A
Drywall	LUH-VRG vandal-resistant grille	No backbox	N/A
Lay-in Tile Ceiling	LUH-VRG vandal-resistant grille	No backbox	LUH-TBAR**
Masonry	LUH-VRG vandal-resistant grille	LUH-BOX (recessed) + LUH-TP trim plate	N/A
Surface-mount	LUH-VRG vandal-resistant grille	LUH-BOX (surface)	N/A

*Tighten dog ears to hold trim ring in place. **T-bridge is recommended for acoustic tile ceilings.

Connections:

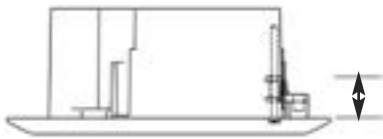


Model LUH-15T ships ready for hookup with a 2-conductor cable exiting through a rear cable clamp.

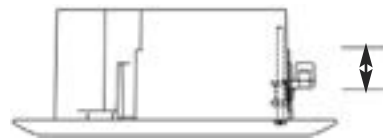


For supervised system applications, the LUH-15T is equipped with an internal series connected 250V DC blocking capacitor (10 uf NP) with maximum supervisory voltage of 100VDC. Connections for supervised systems typically utilize an "in/out" wiring scheme to maintain supervision on all wiring external to the loudspeaker connections. *Requires removal of rear cover to access loudspeaker terminals.*

Mounting Clamps: LUH-15T ships with screwdriver-adjustable clamps.



CLAMPS (as shipped): The out-of-box position of clamps will accept depths of 0–1.5" (approx).



CLAMPS (reversed): The clamp position can be reversed by installer to accept depths of 1"–2.125" (approx).

Specifications:

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.

Frequency Response

Sensitivity (SPL) is presented two ways: Average, which is based on a computer measurement and calculation of the log average SPL over the given frequency response bandwidth with 1 watt input measured at 1 meter. Maximum, which is calculated based on the average sensitivity and the power rating of the driver.

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.

Model No.	LUH-15T
Power Rating:	15W
Frequency Response:	740Hz - 7.4kHz +/- 6dB
Dispersion:	80°
SPL:	105dB 1W/1M average 116.8dB SPL (max) 15W/1M calculation based on power rating & measured sensitivity. 101dB 15W/10-ft.*, 106dB 15W/10-ft.**
Impedance:	OHMS: 5000, 2500, 1300, 666, 333, 89, 45
Power Taps:	25V@ .48, .94, 1.8, 7.5, 15W 70V@ .9, 1.8, 3.8, 7.5, 15W
Size:	7.1" rear dia., 8" face dia., 3.72"D, 9.6" dia. grille

* UL measured A weighted reverberant room sound power output
** 3dB increment rating with a sweep sine-wave signal source - flat weight SPL meter.

PERFORMANCE

Power Handling, Nominal
Sensitivity

15 watts RMS (nominal) measured per EIA Standard RS 426-B
105dB SPL (avg) 1W/1M, 116.8dB SPL (max) 15W/1M calculation based on power rating and measured sensitivity.

Frequency Response

600Hz-12kHz (nominal), 740Hz-7.4kHz (± 6 dB)

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" (194mm) with 4 holes spaced to mount an E.I.A. 8" speaker grille.

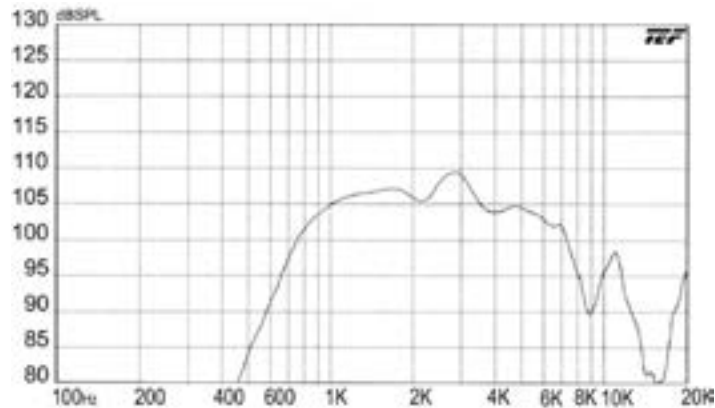
Cutout Diameter

7.25" (184mm)

Net Weight

6 lbs (2.72kg)

SPL vs. Frequency 1W1M



Polar Data:

