

Model: LH-30T

# LOWELL 30W Re-Entrant Horn

## Description

Lowell Model LH30T is a double re-entrant metal horn with a high efficiency 30W compression driver to achieve clear and understandable voice paging and tone signaling in indoor or outdoor applications. The all-purpose horn is ideal for use where a weather-resistant speaker is specified for public address and signaling applications that require high intelligibility such as schools, recreational facilities, warehouses, distribution centers, parking facilities, and commercial buildings of all kinds. Model LH-30T operates within a frequency range of 350Hz-7kHz (nominal), 480Hz-3.3kHz ( $\pm 6$ dB) with a sensitivity of 123.8dB SPL (max) 30W/1M calculation based on power rating and measured sensitivity, 109dB SPL (avg) 1W/1M to provide clear voice communication.

The horn includes a high quality transformer for versatile use in 25V, 70V or 100V distributed applications. Transformer taps are selected with a screwdriver. Transformer tap selector and screw terminal connections are located on the rear of the horn in a recessed area with integral strain relief and protective plastic cover. The horn mounts using a universal, swivel-style bracket for efficient and versatile installation and positioning of the projector. The mounting bracket base measures 2.875" dia. with three equally spaced holes (.28" dia.). The horn assembly measures 11" dia. x 10.5"H x 10.25"L. It is metal and plastic construction with a durable grey epoxy finish for long service life. The horn assembly weighs 5.1 lbs. and ships ready for installation.



Model LH-30T 30W  
general purpose re-entrant horn.

## Features

- Clear and loud paging, music and tone signaling.
- Versatile application in 25V, 70V or 100V systems with built-in transformer (screwdriver adjustable).
- Weather-resistant assembly suitable for indoor or outdoor use.
- Universal swivel mounting bracket for easy installation and precise adjustment of orientation.
- Easy 2-wire hook-up to rear access screw terminals.

## A&E Specifications

The re-entrant horn loudspeaker shall be Lowell Model LH-30T. It shall be a double re-entrant design with a high efficiency 30W compression driver, round bell and universal swivel-style base. Power rating shall be 30 watts continuous. Frequency response shall be 350Hz-7kHz (nominal), 480Hz-3.3kHz ( $\pm 6$ dB) with a sensitivity of 123.8dB SPL (max) 30W/1M calculation based on power rating and measured sensitivity, 109dB SPL (avg) 1W/1M. Dispersion shall be 45 degrees @2000Hz (-6dB). Impedance shall be 2500, 1300, 666, 333, 167, 89, 45 ohms. The horn shall include a 25/70/100V transformer with screwdriver selectable taps. Taps for 25V use shall be: .25, .48, .94, 1.9, 3.7, 7.5, and 15W. Taps for 70V use shall be: 2, 3.8, 7.5, 15, and 30W. Taps for 100V use shall be: 4, 7.7, 15, and 30W. Transformer connections shall be protected by a plastic cover with strain relief. The horn assembly shall measure 11" Dia. x 10.5" H x 10.25" L. and shall be weather-resistant metal and plastic construction with all metal parts painted in corrosion resistant grey epoxy.

Model No.	Description.	Size	Weight
LH-30T	30W Re-entrant Horn	10.5"H x 10.25"L (11" dia.)	5.1 lbs.

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**Lowell™**

Model: LH-30T

# LOWELL 30W Re-Entrant Horn

## PERFORMANCE

Power Handling, Nominal  
Sensitivity

30 watts RMS (nominal) measured per EIA Standard RS 426-B  
123.8dB SPL (max) 30W/1M calculation based on power rating and measured sensitivity 1W/1M, 109dB SPL (avg) 1W/1M

Frequency Response

350Hz (nominal), 480Hz-3.3kHz ( $\pm 6$ dB)

Dispersion Angle

45° @ 2000Hz octave (-6dB)

Impedance

2500, 1300, 666, 333, 167, 89, 45 ohms

Transformer Taps

Screwdriver adjustable: 25V @ .25, .48, .94, 1.9, 3.7, 7.5, 15W  
70V @ 2, 3.8, 7.5, 15, 30W  
100V @ 4, 7.7, 15, 30W

Connections

Screw terminals with provisions for strain relief. Protected by a plastic cover affixed by 2 screws.

## PHYSICAL

Dimensions

11" (279mm) dia. x 10.5" (267mm) H x 10.25" (260mm) L

Housing Material

Cast aluminum with ABS plastic terminal cover

Mounting Base

2.875" (73mm) dia. with three equally spaced .187" (4.7mm) holes.

Mounting Bolt Circle

2.25" (57mm)

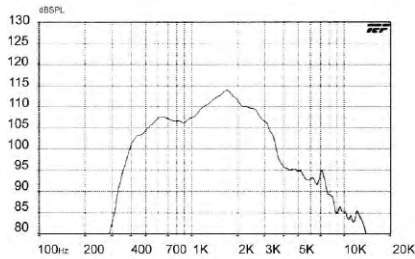
Net Weight

5.1 lbs. (2.4kg)

Shipping Weight

5.8 lbs. (2.6kg)

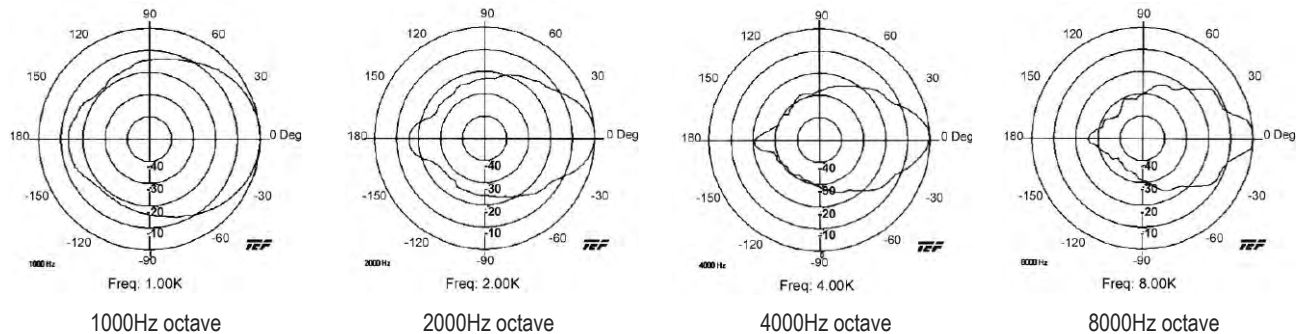
## SPL vs. Frequency 1W/1M



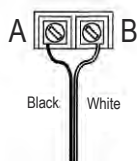
**Low Frequency Protection:** The LH-15T is not designed to operate below 300 Hz. Head-end processing equipment should include a 300 Hz high-pass filter with a roll-off of 6dB per octave to limit the low frequency input to the horn. If head-end processing is not available, an alternate method of providing low frequency protection for the horn driver is to insert one non-polarized series capacitor at the high side input (terminal B) of each horn. See the table below for typical protection capacitor values.

Horn Model No.	25 Volt Line	70 Volt Line	100 Volt Line
LH-30T	30 mfd	4 mfd	2 mfd

## Polar Data:



## Connections:



A terminal for 2-wire connection is located on the rear of the horn in a recessed area with integral strain relief and protective plastic cover.

Be sure to observe polarity ("-" to terminal A and "+" to terminal B).

## Transformer Settings:

Switch Position	Impedance	Watts @ 25V	Watts @ 70V	Watts @ 100V
1	2500	.25	2	4
2	1300	.48	3.8	7.7
3	666	.94	7.5	15
4	333	1.9	15	30
5	167	3.7	30	DO NOT USE*
6	89	7.5	DO NOT USE*	DO NOT USE*
7	45	15	DO NOT USE*	DO NOT USE*
8	OFF	OFF	OFF	OFF

\* **IMPORTANT:** Note that switch positions 6 and 7 are not used on 70V applications; and positions 5, 6, and 7 are not used on 100V applications. They exceed the capacity of the driver and transformer and could damage or destroy the driver and/or amplifier.

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