S P E C I F I C A T I O N S

DTH® 118b

Low-Frequency Fold-Horn Enclosure

SPECIFICATIONS

Frequency Response, 1 Meter On-Axis, Swept Sine in Anechoic Environment:
58 Hz to 300 Hz
38 Hz to 150 Hz (Processed)

Low-Frequency Cut-Off (-3 dB point):
58 Hz
38 Hz (Processed)

Usable Low-Frequency Limit (-10 dB point):
55 Hz
35 Hz (Processed)

Power Handling:
400 W continuous (56.6 V RMS)
800 W program
1,600 W peak

Sound Pressure Level, 2.8V 1 meter in anechoic environment:
104 dB

Maximum Sound Pressure Level:
132 dB

Transducer Complement:
One 1888-8 HP Black Widow® driver

Recommended Crossover Frequency:
120 Hz to 250 Hz range

Impedance (Z):
8 ohms rated
9.4 ohms minimum

Input Connections:
One Neutrik® four-conductor Speakon® (NL4MP)
One Neutrik® eight-conductor Speakon® (with four-conductor NL4MP output)

Enclosure Materials and Finish:
3/4" plywood with black polyurethane coating and plasticized metal grille

Dimensions (H x W x D):
40-1/4" x 26" x 31-3/4"
(102.2 cm x 66 cm x 80.6 cm)

Net Weight:
172 lbs. (78.2 kg)

FEATURES

- 18" high power Black Widow® woofer
- Compact, folded-horn design
- 16-gauge powder coated metal grille
- Four- and eight-conductor input with four-conductor output
- 400 watts continuous power handling
- Heavy-duty, built-in casters

PEAVEY

DESCRIPTION

The DTH® 118b is a low-frequency, folded-horn enclosure designed to augment bass reinforcement for a full-range system. Its folded-horn design combines efficiency and low-frequency bandwidth into a compact, yet very powerful, bass enclosure.

The DTH 118b uses one 18" 1888-8 HP Black Widow® woofer in the compression chamber of the horn. The amount of compression both from the rear of the woofer cone and into the slot-loaded horn throat effectively raises the impedance enough to rate the system at 8 ohms .

The cabinet is constructed of 7-ply, 3/4" high-density plywood with a black polyurethane coating. Recessed handles on each side and rear casters aid in convenient transport. Feet on the side as well as bottom allow flexibility in stacking other mid- and high-frequency enclosures using the DTH 118b as a stable base.

Rear panel connections are designed to allow a simple four-conductor input for the DTH 118b alone, or eight-conductor input with a four-conductor output for bi-amping to other systems. For example, if an eight-conductor cable is used, then two pair can be parallelled into a four conductor for high current capacity, and drive the DTH 118b from its low-frequency amplifier; while the other four can be configured as bi-amp output for an upper frequency two-way system.

PERFORMANCE OPTIMIZATION

The DTH 118b can be placed relative to stage, floor and/or wall surfaces in a variety of ways to extend its already impressive low frequency performance. Using existing surfaces in this way creates a virtual coupling of the horn to those surfaces that guide the expansion of the sound wavefronts radiated by the mouth of the horn, which can result in as much as a 6 dB increase in efficiency at frequencies below 50 Hz.

Placement suggestions include freestanding the DTH 118b on its bottom or side on a floor or stage with at least four feet of clear floor space in front of the horn mouth. Another novel placement approach is to stand the horn upright and then face the horn mouth into a room corner at an angle of 45°, 15 inches from the walls. Thus, the room itself becomes an extension of the horn mouth. This placement into the room corner can be further enhanced by using a triangular 3/4" or thicker plywood “cover” (not supplied by Peavey) that serves the purpose of sealing the top of the DTH 118b to the walls, much like the floor seals the bottom to the same walls. This cover need not extend farther into the room than the rear of the DTH 118b, and if constructed appropriately, can also be used to support the mid- and high-frequency enclosures of a full-range system.

FREQUENCY RESPONSE

This measurement is useful in determining how accurately a given enclosure reproduces an input signal. The frequency response of the DTH 118b is measured at 1 meter using a 2.8-volt swept sine input. As shown in Figure 1, the DTH 118b provides a smooth frequency response below 60 Hz and up to the crossover frequency.

Low frequencies can be extended downward by using the optional Peavey DTH 118b Sub Processor. The DTH 118b Sub Processor specifically provides all the necessary elements to optimize the performance of the DTH 118b and the earlier DTH 118 folded horn bass cabinets. Subsonic filtering is included, which allows maximum power handling at low frequencies. Moderate Q filtering maximizes the output of the DTH 118b near horn cutoff. Additionally, optimized highpass outputs are provided for the DTH 4000 series speakers.

An anechoic low frequency response curve of the DTH 118b after processing is shown in Figure 2. The amount of low frequency extension when the DTH 118b is used in a room will be better than shown in the figure. This is due to the room placement of the cabinet as discussed in the previous section.

POWER HANDLING

There are many different approaches to power handling ratings. Peavey rates this speaker system’s power handling using a modified form of the AES Standard 2-1984. Utilizing audio band (20 Hz to 20 kHz) pink noise with peaks over four times the RMS level, this strenuous test signal assures the user that every portion of this system can withstand today’s high-technology music. The test signal contains large amounts of very low frequency energy, effectively simulating the frequency content of live music situations. The full measure of high frequencies in the test signal allow for exposure of the speaker system to synthesized tones that may extend beyond audibility. This rating is contingent upon having a minimum 3 dB of amplifier headroom available.

ARCHITECTURAL AND ENGINEERING SPECIFICATIONS

The loudspeaker system shall have an operating bandwidth of 58 Hz to 300 Hz. The output level shall be 104 dB when measured at a distance of one meter with an input of one watt. The nominal impedance shall be 8 ohms. The continuous power handling shall be 400 watts, with maximum program power of 800 watts and minimum amplifier headroom of 3 dB. The outside dimensions shall be 26 inches wide by 40 1/4 inches high by 31 3/4 inches deep. The weight shall be 172 lbs. The loudspeaker system shall be a Peavey model DTH 118b.

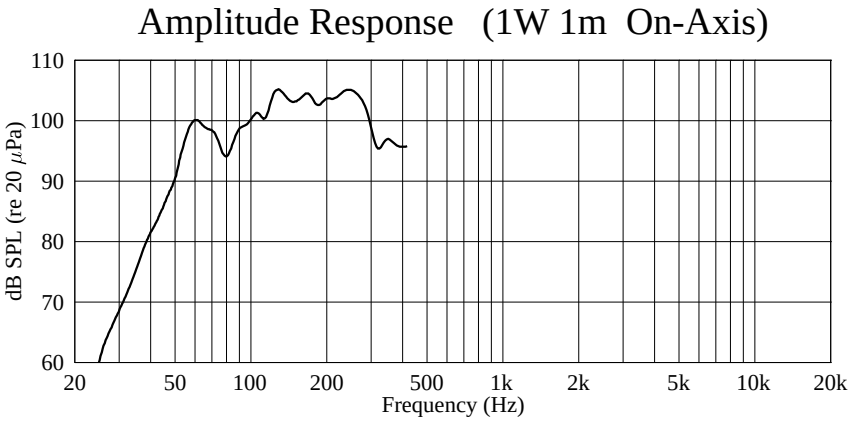


Figure 1. Frequency Response (unprocessed)

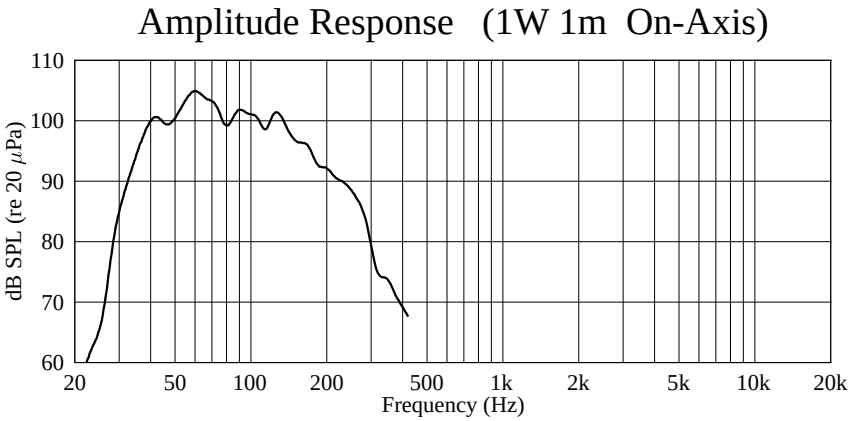


Figure 2. Frequency Response with DTH 118 Sub Processor

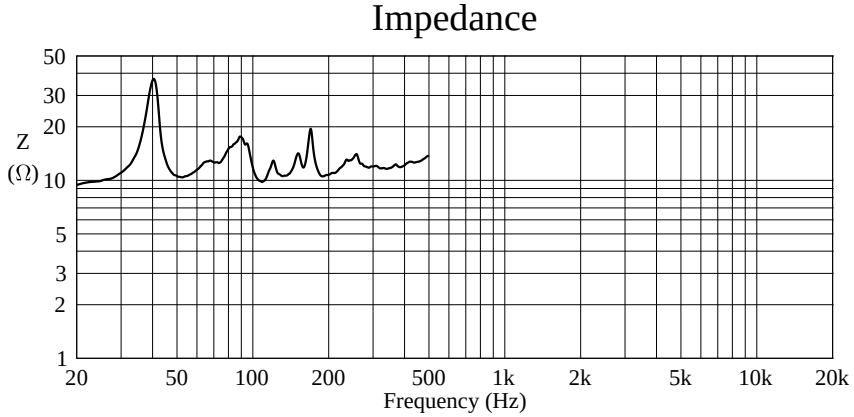
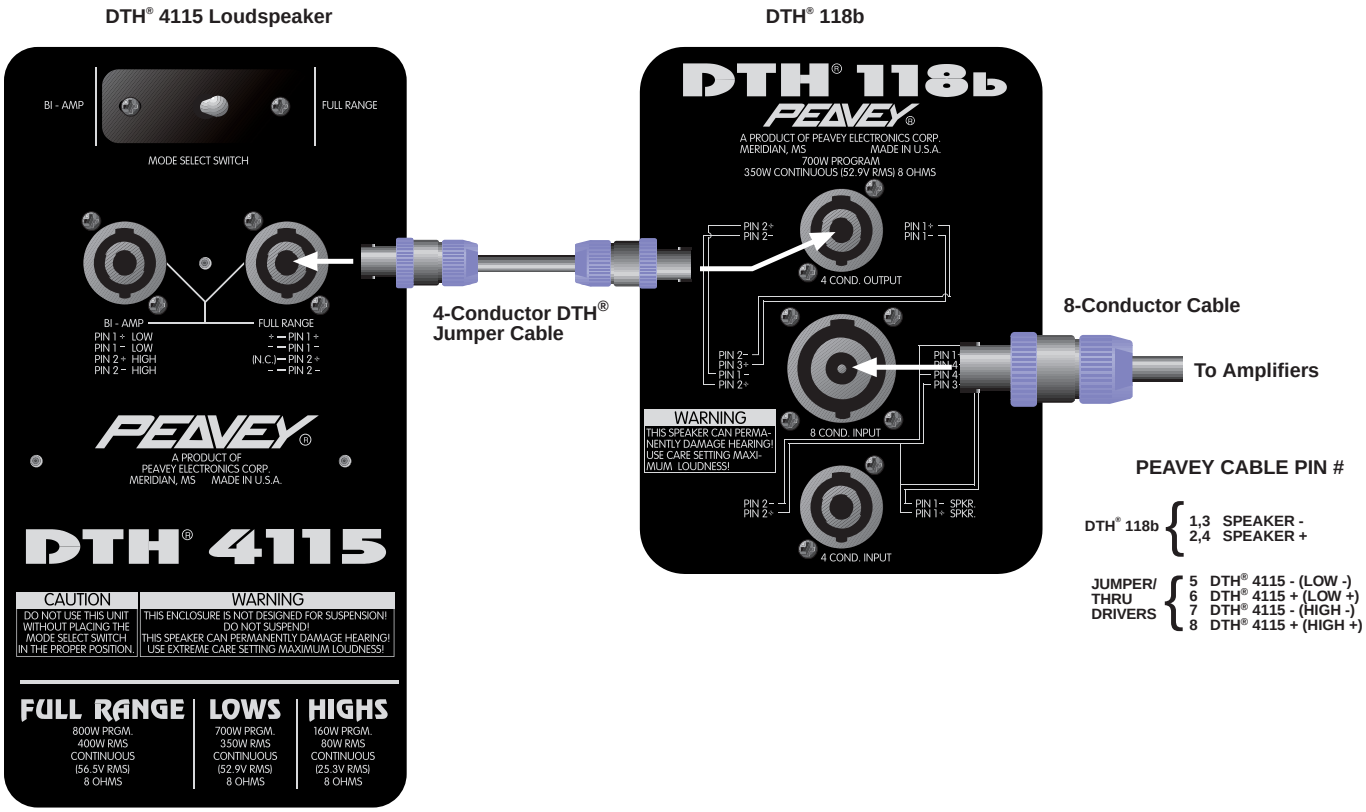


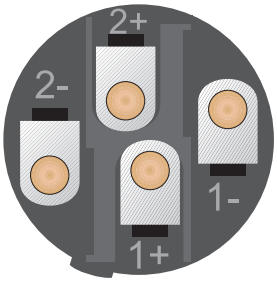
Figure 3. Impedance

DTH® 118b
Wiring Diagram



Loudspeakers other than the DTH® 4115 may also be wired in this manner.

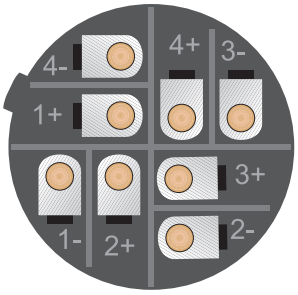
4-Pin Speakon® Number/Wire Scheme



DTH®			DTH®SUB*		
pin 1+	low	- white	pin 1+	low	- white
pin 1-	low	- green	pin 1-	low	- green
pin 2+	high	- red	pin 2+	low	- red
pin 2-	high	- black	pin 2-	low	- black

*Stacked Banana Plugs

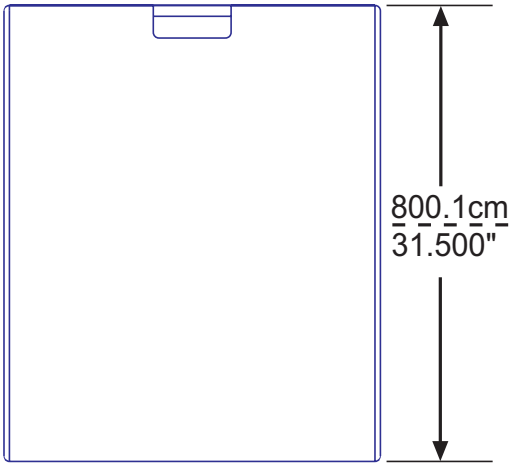
8-Pin Speakon® Number/Wire Scheme



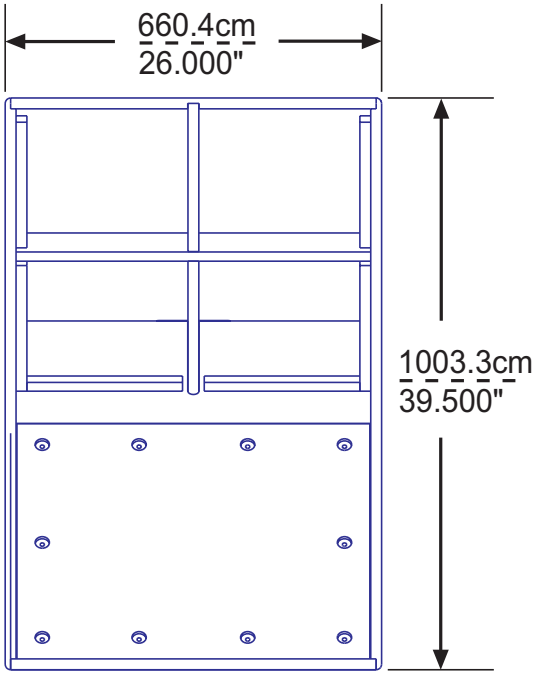
8-Conductor Speakon® (NL8MP)/ Pin-Out Cross Reference

Peavey 8-Conductor Cable	NL8MP
1	1+
2	4-
3	4+
4	3-
5	3+
6	2-
7	2+
8	1-

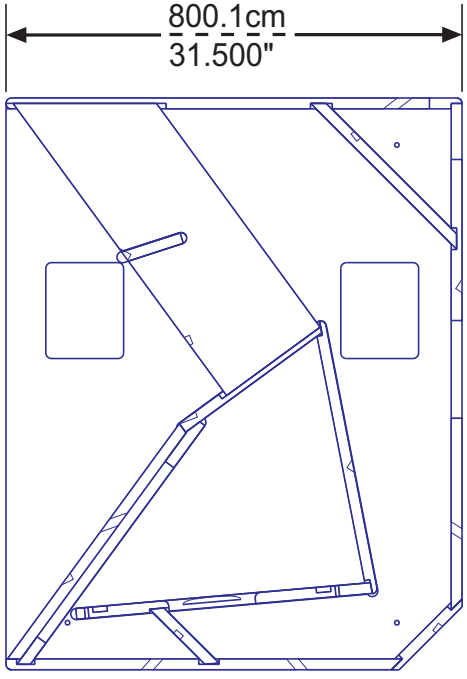
DTH® 118b Mechanical Drawing



Top View



Front View



Side View

WARNING

Exposure to extremely high noise levels may cause a permanent hearing loss. Individuals vary considerably in susceptibility to noise induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a sufficient time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the following permissible noise level exposures.

Duration Per Day In Hours	Sound Level dBA, Slow Response
8	90
6	92
4	95
3	97
2	100
1-1/2	102
1	105
1/2	110
1/4 or less	115

According to OSHA, any exposure in excess of the above permissible limits could result in some hearing loss. Ear plugs or protectors in the ear canals or over the ears must be worn when operating this amplification system in order to prevent a permanent hearing loss if exposure is in excess of the limits as set forth above. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels such as this amplification system be protected by hearing protectors while this unit is in operation.

ONE YEAR LIMITED WARRANTY

NOTE: For details, refer to the warranty statement.
Copies of this statement may be obtained by contacting
Peavey Electronics Corporation,
P.O. Box 2898, Meridian, Mississippi 39302-2898.

Features and specifications subject to change without notice.

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