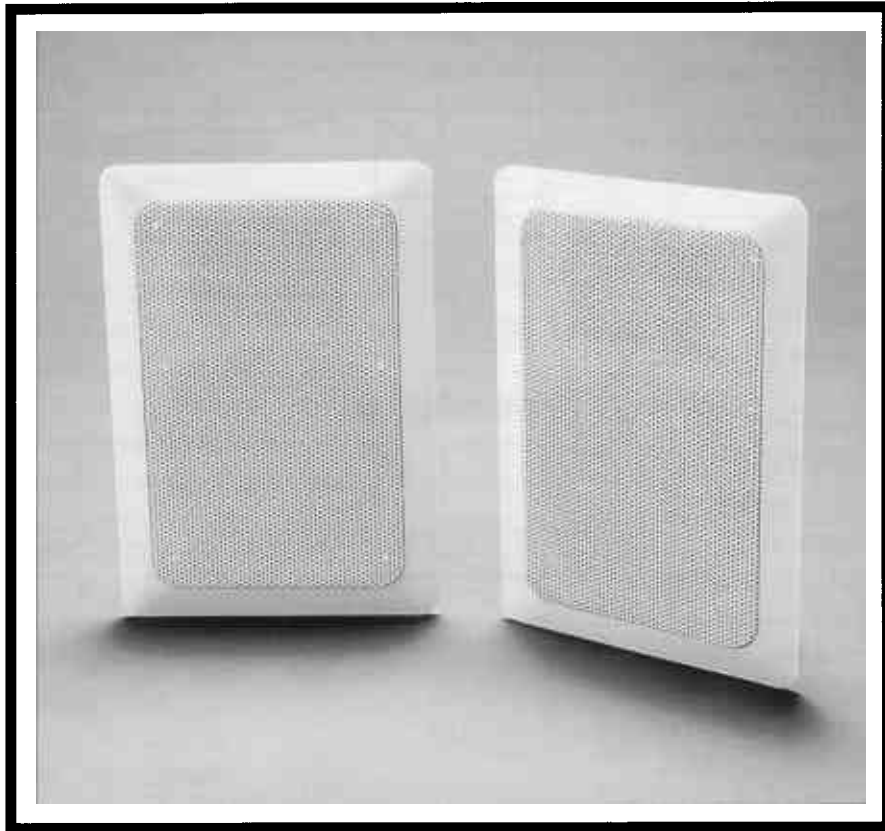


# SPECIFICATIONS



## WS™ 502 Full Range, Two-way System

### SPECIFICATIONS

**Frequency Response:**

68 Hz to 17 kHz

**Low Frequency Cut-off: (-3 dB point)**

68 Hz

**Usable Low Frequency Limit:  
(-10 dB point)**

47 Hz

**Power Handling:**

50 watts continuous (20 volts RMS)  
100 watts program

**Sound Pressure Level • 1 Watt at  
1 Meter, Swept Sine Input in  
Anechoic Environment:**

88 dB

**Maximum Sound Pressure Level:**

102 dB

**Transducer Compliment:**

5-1/4" polypropylene woofer  
1" dome tweeter

**Harmonic Distortion:****1 Watt**

2nd Harmonic:  
100 Hz; 1.1%  
1,000 Hz; 0.3%

3rd Harmonic:  
100 Hz; 1.1%  
1,000 Hz; 0.5%

**1/10 Rated Power — 5 Watts**

2nd Harmonic:  
100 Hz; 1.4%  
1,000 Hz; 0.4%

3rd Harmonic:  
100 Hz; 2.0%  
1,000 Hz; 0.5%

**Input Connections:**

Spring loaded push terminals

**Impedance:**

8 ohms (nominal)  
5.9 ohms (minimum)

**Crossover Frequency:**

5 kHz

**Enclosure Materials & Finish:**

White ABS plastic frame and metal grille

**Mounting:**

Wall mount or ceiling mount

**Dimensions & Weight:**

9-1/2" H x 6-1/16" x W x 2-5/8" D cutout  
10-15/16" H x 7-1/2 W outside

**Net Weight:**

3 lbs. 6 ozs., per speaker

## DESCRIPTION

The WS™ 502 is a full range two-way system designed for use in wall or ceiling mount situations. The 5¼" polypropylene woofer and the 1" soft dome tweeter with diffusor plate combine to offer a clean-sounding speaker system in a convenient package. The white plastic frame and metal grille can be easily painted to suit any application.

The WS 502 offers 50 watts continuous power handling and an 8 ohm impedance. Frequency response is from 68 Hz to 17 kHz with a sensitivity of 88 dB at 1 meter with 1 watt input.

## FREQUENCY RESPONSE

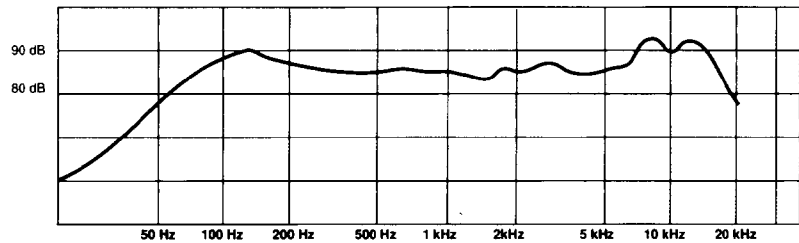
This measurement is useful in determining how accurately a given enclosure reproduces an input signal. The frequency response of the WS 502 is measured at 1 meter using a 2.8 volt swept sine input. As shown in Figure 1, the selected drivers in the WS 502 combine to give a smooth frequency response from 68 Hz to 17 kHz.

## HARMONIC DISTORTION

Second and third harmonic distortion versus frequency is plotted in figures 3 through 6 for two power levels:  $1/10$  of rated input power and either  $1/100$  of rated input power or 1 watt (whichever is greater). Distortion is read from the graph as the difference between the fundamental signal and the desired harmonic. As an example, distortion that is 40 dB down from the fundamental is equivalent to 1%.

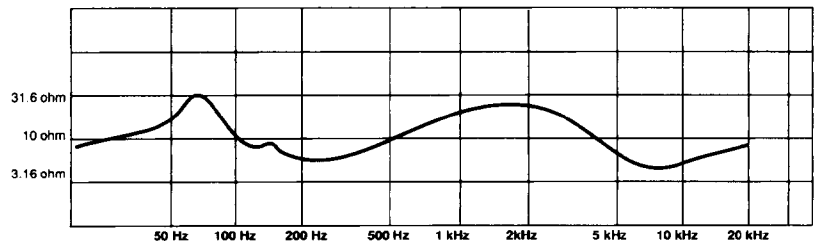
### Frequency Response

### Fig. 1



### Impedance

### Fig. 2



## 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-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 tone that may extend beyond audibility. This rating is contingent on having a minimum 3 dB of amplifier headroom available.

## MOUNTING

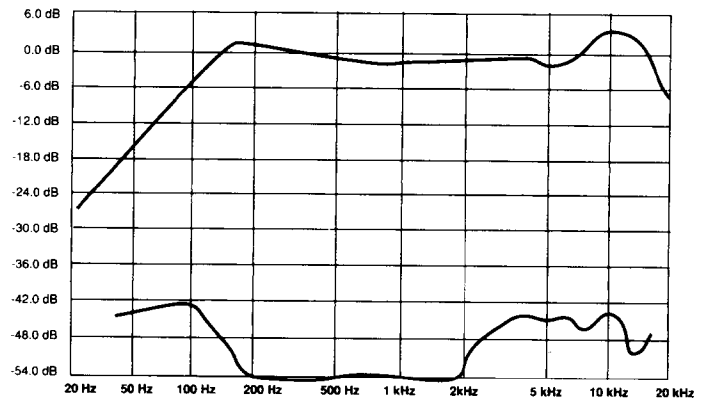
The WS 502 comes with the hardware necessary to mount into a wall. Please check local electrical codes prior to mounting speaker into wall.

## ARCHITECTURAL & ENGINEERING SPECIFICATIONS

The wall speaker system shall have an operating bandwidth of 68 Hz to 17 kHz. The output level shall be 88 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 50 watts, maximum program power of 100 watts, with a minimum amplifier headroom of 3 dB. The outside dimensions shall be 7½" wide by 10<sup>15</sup>/<sub>16</sub>" high. The cutout dimensions shall be 6<sup>1</sup>/<sub>16</sub>" wide by 9½" high by 2<sup>5</sup>/<sub>8</sub>" deep. The weight shall be 3 pounds, 6 ounces. The wall speaker system shall be a WS 502.

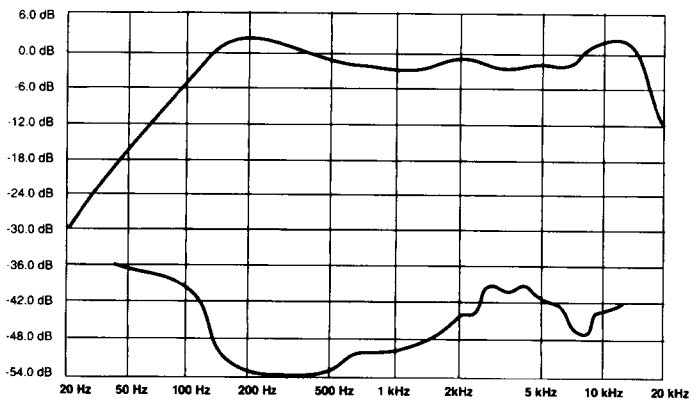
1W 2nd Harm.

Fig. 3



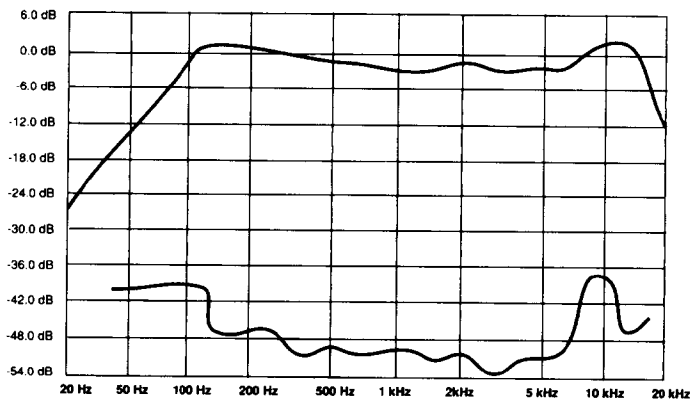
1W 3rd Harm.

Fig. 4



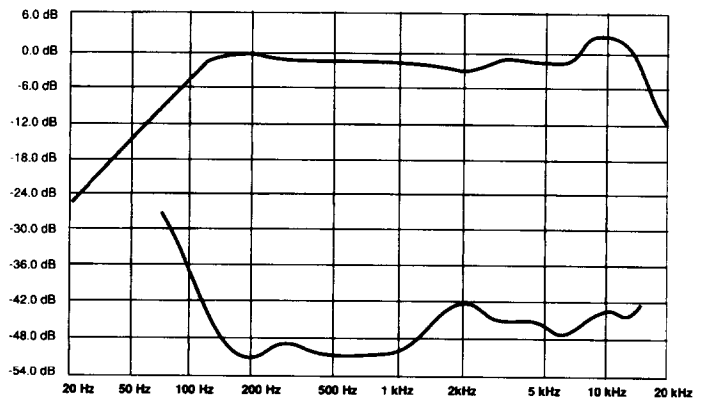
5W 2nd Harm.

Fig. 5



5W 3rd Harm.

Fig. 6



## LIMITED WARRANTY

Peavey Electronics Corporation warrants to the original purchaser of this new Architectural Acoustics product that it is free from defects in material and workmanship. If within one (1) year from date of purchase a properly installed product proves to be defective and Peavey is notified, Peavey will repair or replace it at no charge. (Note: Batteries and patch cords not covered.) "Original purchaser" means the customer for whom the product is originally installed.

Damage resulting from improper installation, interconnection of a unit or system of another manufacturer, accident or unreasonable use, neglect or any other cause not arising from defects in material and workmanship is not covered by this warranty. The warranty is valid only as to products purchased and installed in the United States.

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Peavey's liability to the original purchaser for damages for any cause whatsoever and regardless of the form of action, is limited to the actual damages up to the greater of Five Hundred Dollars (\$500) or an amount equal to the purchase price of the product that caused the damage or that is the subject of or is directly related to the cause of action. This limitation of liability will not apply to claims for personal injury or damage to real property or tangible personal property allegedly caused by Peavey's negligence. For information on service under this warranty, call a Peavey customer service representative at (601) 483-5376.



Features and specifications subject to change without notice.

A Division of Peavey Electronics Corporation

711 A Street / Meridian, MS 39301 / U.S.A. / (601) 483-5376 / Fax (601) 486-1154

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