SPECIFICATIONS Q-Wave™ 2



Frequency response, 1 meter on-axis, swept-sine in anechoic environment:
52 Hz to 18 kHz (±3 dB)

Usable low frequency limit (-10 dB point):
39 Hz

Power handling:
Full range:
800 W continuous
1,600 W program
3,200 W peak

Low frequency section:
600 W continuous
1,200 W program
2,400 W peak
High frequency section:
100 W continuous
200 W program
400 W peak

Sound pressure level, 1 Watt, 1 meter in anechoic environment:
Full range:
97 dB SPL, (2.83 V input)
Low frequency section:
98 dB SPL, (2.83 V input)
High frequency section:
110 dB SPL, (2.83 V input)

Maximum sound pressure level (1 meter):
Full range:
126 dB SPL continuous
132 dB SPL peak
Low frequency section:
126 dB SPL continuous
132 dB SPL peak
High frequency section:
130 dB SPL continuous
136 dB SPL peak

Nominal coverage pattern:
90° horizontal x 40° vertical

Transducer complement:
Low frequency section:
1 x 15" woofer, vented
1508-8 ALCP ProRider™
High frequency section:
1 x 1.6" exit/100 mm voice coil compression driver on CD horn 44 XT (w/o adapter) on a CH®942qt horn

Box tuning frequency:
Low frequency section:
46 Hz

Harmonic distortion:

1% rated power	
2nd harmonic:	
100 Hz:	0.25%
1 kHz:	0.14%
3rd Harmonic:	
100 Hz:	0.25%
1 kHz:	0.32%
10% rated power	
2nd harmonic:	
100 Hz:	0.35%
1 kHz:	0.44%
3rd Harmonic:	
100 Hz:	0.55%
1 kHz:	0.35%

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Crossover frequency (internal passive):
Low frequency - high frequency:
1,200 Hz

Time offset:
Low frequency: delay 0.27 ms
High frequency: 0.00 ms

Impedance (Z):
Full range:
Nominal: 8.0 Ω
Minimum: 6.2 Ω
Low frequency:
Nominal: 8.0 Ω
Minimum: 6.5 Ω
High frequency:
Nominal: 8.0 Ω
Minimum: 7.1 Ω

Input connections:
Two 4-pin Neutrik® Speakon® jacks in parallel for full-range input. One 4-pin switching Neutrik Speakon jack features a normal 4-pin Speakon jack in parallel with the driver side for bi-amp inputs. The second jack allows daisy chaining when bi-amping.

Enclosure materials and finish:
0.720 in. plywood finished in black Hammer Head™ Polyurethane

Mounting provisions:
This unit is not designed for overhead suspension; however, an optional flying version is available.

Dimensions (H x W x D):
Front:
33.38" x 21.13" x 22.59"
848 mm x 537 mm x 574 mm
Rear:
33.38" x 13.78" x 22.59"
848 mm x 350 mm x 574 mm

Net weight:
98 lbs. (44.5 kg)

Features
- 1,600 W program, 3,200 W peak
- Very low power compression
- Quadratic Throat Waveguide™ technology
- 15" Pro Rider™ woofer with 4" VC
- 44XT™ 4" titanium compression driver
- SoundGuard™ 44 tweeter protection
- Low distortion at high SPL
- Trapezoidal enclosure design
- SA-1 stand adaptor

Description
The latest high performance loudspeaker system from Peavey, the Q-Wave™2 has the new extra-high power Pro Rider™ woofer incorporated, a new Quadratic Throat Waveguide™ horn, as well as a very nice looking new cabinet design. Its trapezoidal shape reduces the build-up of standing waves inside the enclosure, minimizing mid-bass and mid-range colorations due to the cabinet.

It is constructed of premium .720" plywood and is covered with a tough, durable black textured Hammer Head™ polyurethane coating. A 16 gauge powder-coated perforated metal grille covers the front of the system to protect the speakers from external damage. An SA-1 stand mount adaptor is built-in for ease of speaker stand use.

The two-way system is comprised of a 15" Pro Rider™ woofer with a Kevlar® impregnated, water-resistant treated cone and dust cap for superior environmental stability. Capable of over 600W of continuous power handling (AES Std 2-1984), the Pro Rider woofer can handle a lot of sheer power. The high frequencies are handled by a 44XT™ 4" titanium diaphragm compression driver, utilizing ferrofluid cooling, coupled to a CH 942qt constant directivity horn utilizing Quadratic Throat Waveguide™ technology. The CH 942qt is protected under US Patent 6,059,069, and due to this patented geometry, the horn has lower distortion than many popular CD horns. The 44XT driver features the Radialinear Planar Phase Correction System, under US Patent 6,064,745, which provides smoother and extended high frequency response.

Input connection to the system is made via two 4-pin Neutrik in parallel, and a 4-pin Neutrik switching jack is provided for bi-amping flexibility while maintaining superior signal integrity. The inclusion of a standard 4-pin Neutrik jack in parallel on the driver side of the bi-amp switching jack provides for daisy chaining to another cabinet when bi-amping.

The internal passive crossover features Sound Guard 44 tweeter protection circuit and an advanced topology crossover with high performance components to provide high power handling and reliability. Peavey's Sound Guard high-frequency driver protection circuitry provides long and medium term driver overload protection when the system is used full-range, or when it is bi-amped, without impairing musical transients or dynamics. The crossover provides driver roll-off and protection, as well as driver EQ for the woofer and horn. The sum total is a clean, clear and smooth response. High-quality, reliable crossover components include polypropylene capacitors, and high current inductors. The optimal integration of the crossover with the selected drivers results in a smooth frequency response from 52 Hz to 18 kHz.

Despite its compact dimensions, this system puts out some serious sound levels. A 1,600 Watts program of clean amplified power can result in precise coverage with excellent clarity and high reliability. Very low power compression and very low distortion combine to provide a clean, dynamic, yet punchy sound.

Frequency response
This measurement is useful in determining how accurately a given unit reproduces an input signal. The frequency response of the Q-Wave 2 is measured at a distance of 1-meter using a 1 Watt (into the nominal impedance) swept-sine input signal. As shown in figure 1, the selected drivers in the Q-Wave 2 combine to give a smooth frequency response from 52 Hz to 18 kHz.

Power handling
There are many different approaches to power handling ratings. Peavey rates this loudspeaker system's power handling using a full-range form of the AES Standard 2-1984. Using audio band 20 Hz to 20 kHz pink noise with peaks of 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. This rating is contingent upon having a minimum of 3 dB of amplifier headroom available.

Harmonic distortion
Second and third harmonic distortions vs. frequency are plotted in Figures 3 and 4 for two power levels. Ten percent (10%) of rated input power and either one percent (1%) of rated input power or one Watt, whichever is greater. Distortion is read from the graph as the difference between the fundamental signal (frequency response) and the desired harmonic. As an example, a distortion curve that is down 40 dB from the fundamental is equivalent to 1% distortion.

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Mounting

⚠ This unit is not designed for over head suspension. Optional flying version available, contact your Peavey dealer or rep for details.

Architectural and Engineering Specifications

The loudspeaker system shall have an operating bandwidth of 52 Hz to 18 kHz. The nominal output level shall be 97 dB when measured at a distance of one meter with an input of one Watt. The nominal impedance shall be 8 Ohms. The maximum continuous power handling shall be 800 Watts, maximum program power of 1,600 Watts and a peak power input of at least 3,200 Watts, with a minimum amplifier headroom of 3 dB. The nominal radiation geometry shall be 90° in the horizontal plane and 40° in the vertical plane. The outside dimensions shall be 33.38" high by 21.13" wide by 22.59" deep. The weight shall be 98 pounds. The loudspeaker system shall be a Peavey model Q-Wave™2.

3 + 2 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 39301-2898.

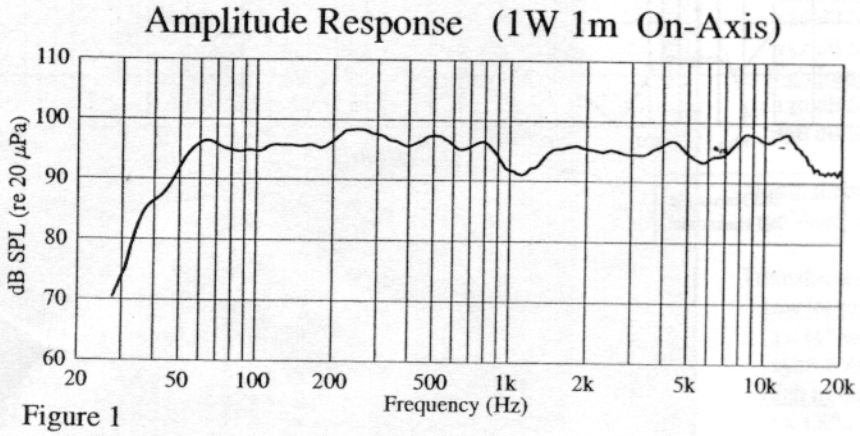


Figure 1

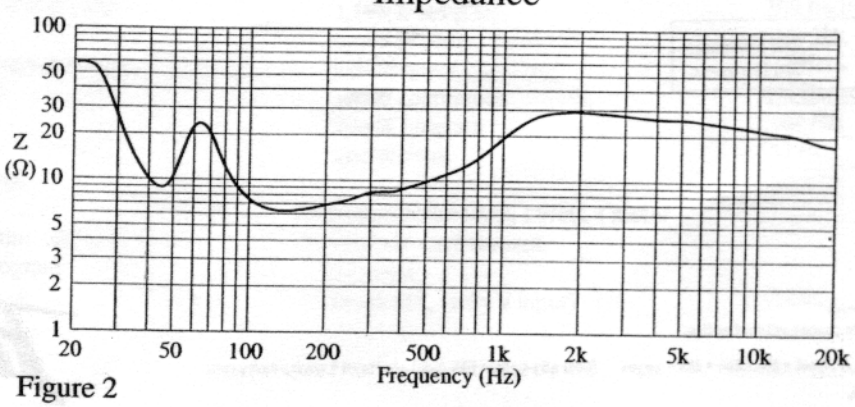
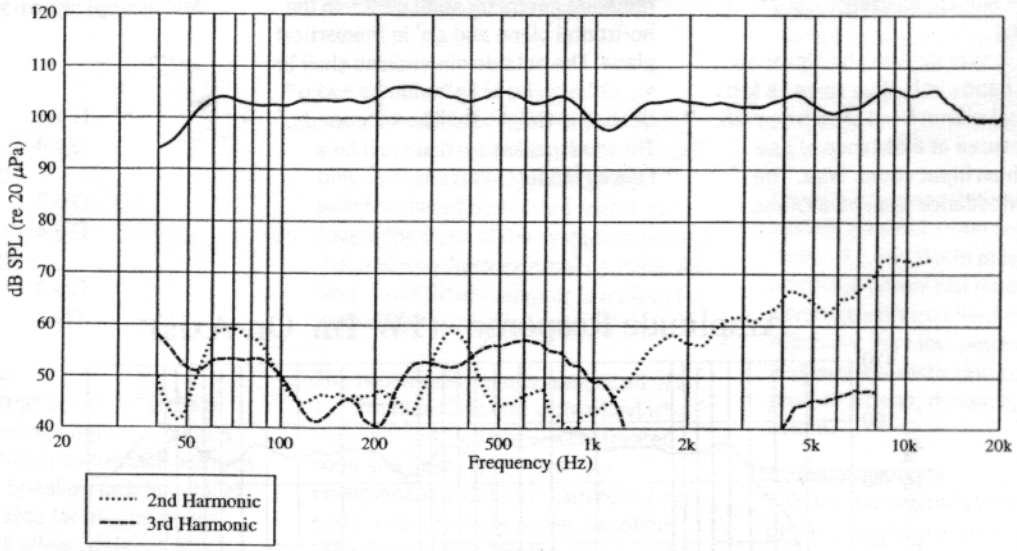
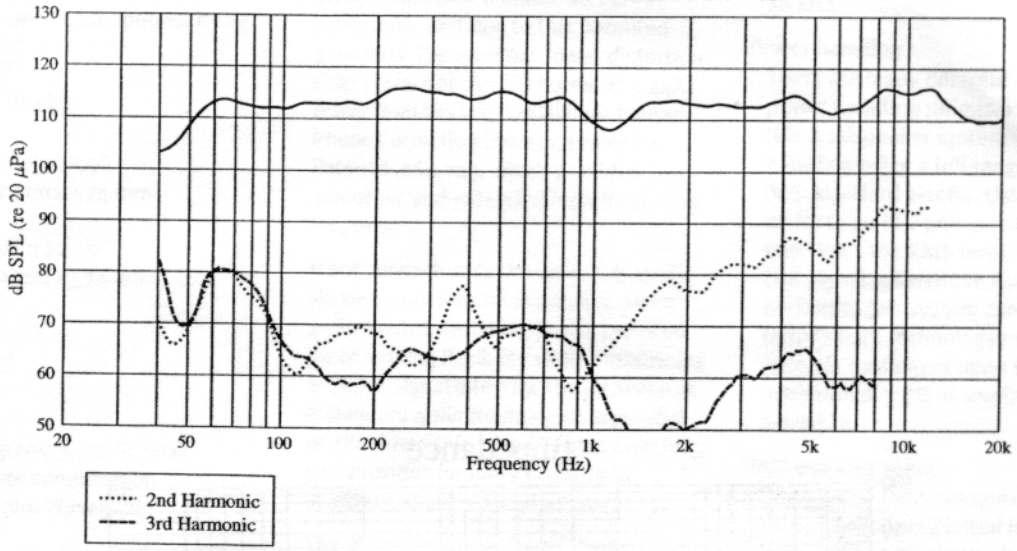


Figure 2

Harmonic Distortion : 1% Rated Power



Harmonic Distortion : 10% Rated Power



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Features and specifications subject to change without notice.

Peavey Electronics Corporation • 711 A Street • Meridian • MS • 39301 (601) 483-5365 • FAX (601) 486-1278 • www.peavey.com

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