SPECIFICATIONS QW™-4F

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

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

Power Handling:
Full Range:
1,400 W continuous
2,800 W program
5,600 W peak

Low frequency section:
1,200 W continuous
2,400 W program
4,800 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:
100 dB SPL, (2.00 V input)

Low frequency section:
100 dB SPL, (2.00 V input)
High frequency section:
110 dB SPL, (2.83 V input)

Maximum sound pressure level (1 meter):
Full Range:
131 dB SPL continuous
137 dB SPL peak
Low frequency section:
131 dB SPL continuous
137 dB SPL peak
High frequency section:
130 dB SPL continuous
136 dB SPL peak

Nominal coverage pattern:
90˚ horizontal by 40˚ vertical

Transducer complement:
Low frequency section:
2x 15" woofer, vented
1508-8 CUCP ProRider™
High frequency section:
1 x 1.6 in. Exit/100 mm voice coil Compression driver on CD horn 44 XT (w/o adapter) on a CH˚942qt

Box tuning frequency:
Low frequency section:
47 Hz

Harmonic Distortion:
1% rated power
2nd harmonic:
100 Hz: 0.18%
1 kHz: 0.40%
3rd harmonic:
100 Hz: 0.10%
1 kHz: 0.28%
10% rated power
2nd harmonic:
100 Hz: 0.50%
1 kHz: 1.70%
3rd Harmonic:
100 Hz: 0.45%
1 kHz: 0.45%

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

Time Offset:
Low frequency: delay 0.34 ms
High frequency: 0.00 ms

Impedance (Z):
Full range:
Nominal: 4.0 Ω
Minimum: 3.4 Ω
Low frequency:
Nominal: 4.0 Ω
Minimum: 3.5 Ω
High frequency:
Nominal: 8.0 Ω
Minimum: 7.1 Ω

Input Connections:
Two 4-pin twist-lock connectors in parallel for full range input, one 4-pin switching Neutrik® Speakon® jack with a 4-pin twist-lock connector in parallel with the driver side for bi-amp inputs. Second jack allows daisy chaining when bi-amping.

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

Dimensions (H x W x D):
Front:
49.25" x 21.13" x 22.69"
1251 mm x 537 mm x 576 mm
Rear:
49.25" x 13.78" x 22.69"
1251 mm x 350 mm x 576 mm

Net weight:
142 lbs.(64.5 kg)

Features
- 2,800 W program, 5600 W peak
- Very low power compression
- Quadratic Throat Waveguide™ Technology
- Double 15" Pro Rider™ woofers with 4" VC
- 44XT™ 4" titanium compression driver
- Low distortion at high SPL
- SoundGuard™ 44 tweeter protection
- Trapezoidal enclosure design

Description
The QW™-4F has two of the new extra-high power Pro Rider™ woofers incorporated, as well as a new compact cabinet design. The QW™-4F is a quasi-three way speaker system comprised of two 15" Pro Rider™ woofers with a Kevlar® impregnated cone, and an 44XT™ compression driver loaded onto a CH®942qt constant directivity horn.

The QW™-4F has a trapezoidal shaped enclosure, which reduces the build-up of standing waves inside the enclosure, which minimizes mid-bass and mid-range coloration's 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.

The quasi-three way system is comprised of double 15" Pro Rider™ woofers with Kevlar® impregnated water-resistant treated cones and dust cap for superior environmental stability. Capable of over 1,200 W total of continuous power handling (AES Std 2-1984), the Pro Rider woofers together 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 twist-lock connectors 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 twist-lock connector 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 proprietary high-frequency driver protection circuitry, Sound Guard™, provides long and medium term driver overload protection when the system is used full-range, 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 50 Hz to 18 kHz.

Despite it's compact dimensions for a double 15" based enclosure with a 2" throat compression driver, this system can put out some extremely serious sound levels, and take 2,800 Watts program of clean amplifier power, resulting in precise coverage with excellent clarity and high reliability.

Frequency Response
This measurement is useful in determining how accurately a given unit reproduces an input signal. The frequency response of the QW™-4F 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 QW™-4F combine to give a smooth frequency response from 50 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.

Mounting

⚠ This unit is not designed for over head suspension. Optional Flying Version Available, contact your Peavey dealer or rep for details.

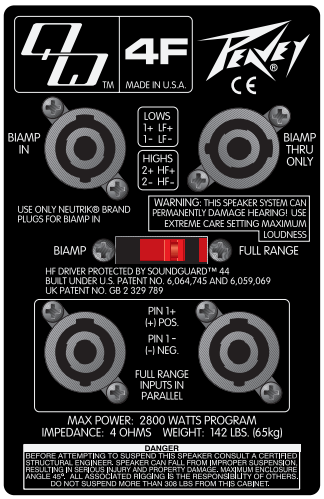
Architectural and Engineering Specifications

The loudspeaker system shall have an operating bandwidth of 50 Hz to 18 kHz. The nominal output level shall be 100 dB when measured at a distance of one meter with an input of one Watt.

The nominal impedance shall be 4 Ohms. The maximum continuous power handling shall be 1,400 Watts, maximum program power of 2,800 Watts and a peak power input of at least 5,600 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 49.25" high by 21.13"wide by 22.69" deep. The weight shall be 136 pounds. The loudspeaker system shall be a Peavey model QW™-4F.

The speaker system enclosure shall provide fly points for 3/8" – 16 threads per inch forged-shoulder machinery eye-bolts of Mil-Spec grade MIL51937-3, with three each on the top and bottom and two each on the sides and back, for a total of 12 suspension points per cabinet.

QW™-4F Input Plate



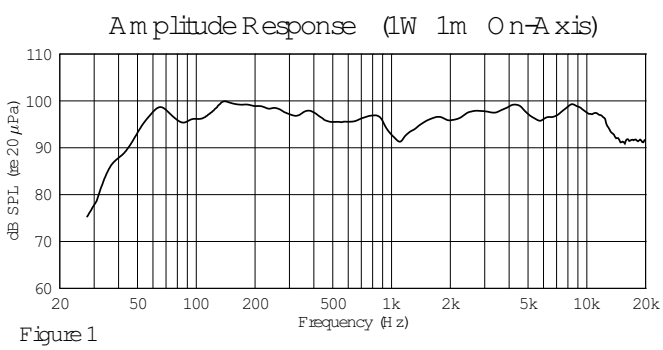


Figure 1

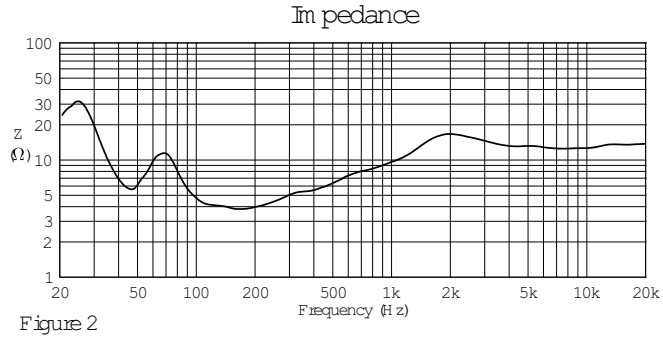
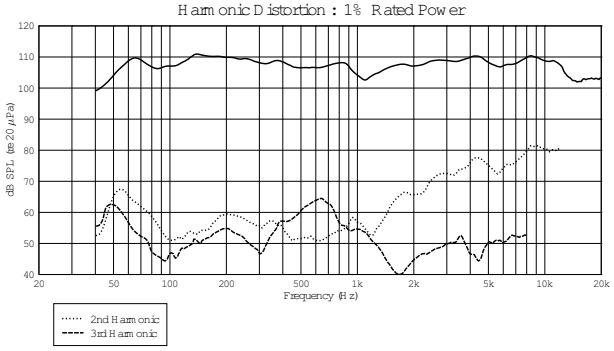
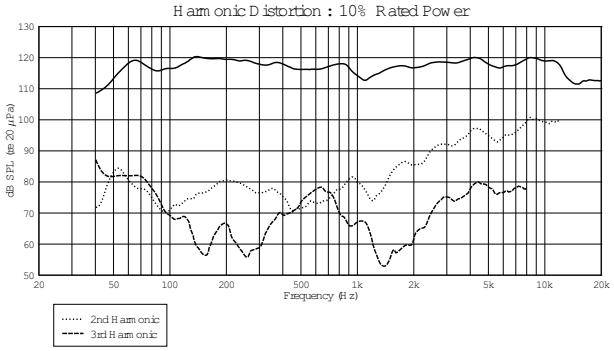


Figure 2



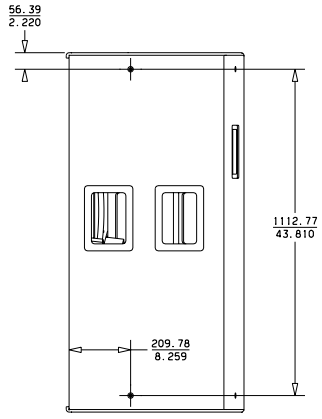


SPECIFICATIONS QW™-4F

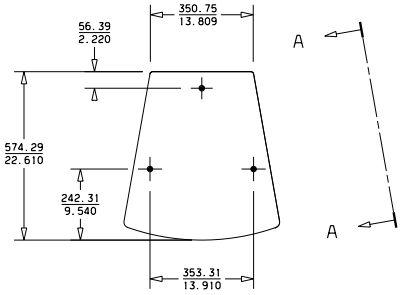
Important Safety Information for Mounting the QW™-4F Speaker System

Warning : Before attempting to suspend these speakers, consult a certified structural engineer. The speaker can fall due to improper suspension, resulting in serious injury and property damage. DO NOT OVER TORQUE HARDWARE. ALWAYS USE SAFETY CHAIN. INSPECT RIGGING ANNUALLY. Other enclosures may be suspended below one QW-4F cabinet. However, the combined weight of additional enclosures and all cables, clamps and other hardware must not exceed 308 pounds. The QW-4F weighs 142 lbs., so the maximum combined weight suspended from the uppermost mounting bracket assemblies must not exceed 450 lbs. Maximum enclosure angle is 45˚. Use only the correct mating hardware. All associated rigging is the responsibility of others.

Inserts provided on the cabinet:
(12) 3/8"-16 Threaded Mounting Suspension Points (3 each top and bottom and 2 each sides and back). Use only forged shoulder machinery eye bolt, Mil Spec MIL51937-3.



SIDE



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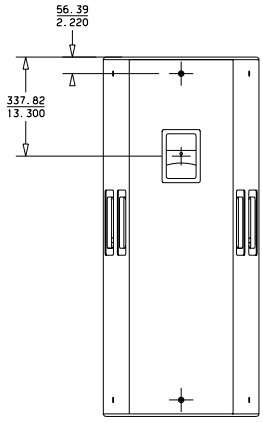

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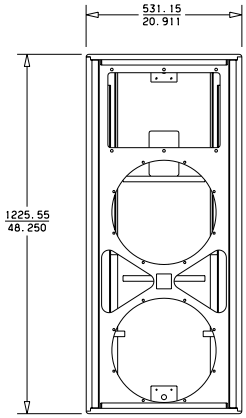

FRONT

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Warranty registration and information for U.S. customers available online at
www.peavey.com/warranty
or use the QR tag below

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Features and specifications subject to change without notice.

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