

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



## Model Rx™22 Extended High Frequency Compression Driver Patented

### SPECIFICATIONS

#### **THROAT PARAMETER:**

1" (25 mm)

#### **NOMINAL IMPEDANCE:**

8 ohms

#### **MINIMUM IMPEDANCE**

5.1ohms

#### **DC RESISTANCE:**

4.7 ohms

#### **POWER CAPACITY 1000 Hz to 20,000 Hz:**

280 watts peak power

140 watts program

70 watts continuous using pink

noise band limited from 1000 Hz to 20 kHz

(AES 2-1984)

#### **POWER CAPACITY 500 Hz to 20,000 Hz:**

240 watts peak power

120 watts program

60 watts continuous using pink

noise band limited from 500 Hz to 20 kHz

#### **SENSITIVITY:**

111 dB SPL 1 watt at 1 meter

on-axis on a 90° H X 45° V horn

#### **NOMINAL EFFICIENCY:**

30%

#### **FREQUENCY RESPONSE:**

500 Hz to 20,000 Hz

#### **RECOMMENDED CROSSOVER:**

1200 Hz at 12 dB/Octave

#### **LOWEST RECOMMENDED CROSSOVER:**

500 Hz at 12 dB/Octave

#### **DIAPHRAGM:**

Commercially pure titanium

#### **VOICE COIL DIAMETER:**

2.0" (50.8 mm)

#### **VOICE COIL MATERIAL:**

Edge-wound copper-clad aluminum ribbon  
with a high temp composite bobbin

#### **FLUX DENSITY:**

17,500 gauss (1.75T)

#### **DIMENSIONS:**

5.250" (133.33 mm) diameter x

3.05" (77.4 mm) depth

#### **HORN COUPLING DIAMETER:**

7/8" (22.2 mm)

#### **HORN COUPLING THREADS:**

Standard 1 3/8" — 18

#### **NET WEIGHT:**

5 lbs. 6 oz.

#### **SHIPPING WEIGHT:**

6 lbs. 5.5 oz.

#### **DESCRIPTION**

The Rx™22, referred to as the Radial X compression driver, is one of the latest advances in compression driver design and manufacturing for Peavey Electronics. The Radial X has been designed to improve driver performance, reliability, increased power handling, and the linearity of diaphragm excursion. With over 25 years experience in compression driver design and manufacturing, Peavey is proud to introduce the-all new Rx™22 compression driver to its line of speakers.

The Rx22 is engineered for a more transparent high end, less distortion and overall improvement to

your sound system. If you are planning to upgrade your system with a Rx22 or purchase a system with the Rx22, as soon as you hook it up you'll hear the difference. You'll be astonished at the improvement of the new Rx22 has over older compression driver technology.

#### **MECHANICS**

The Rx22 is designed with a solid one-piece titanium diaphragm and has received a patent (pat. num. 6,064,745) for a Radialinear™ phase plug. It also includes an all-new magnet structure, designed with the latest tools in finite element analysis.

The Rx22 has more power handling, by as much as 50%, as compared to similar compression drivers. Our research and development team utilized the latest technological advances in metallurgy, polymer science and adhesives to bring you the Rx22 driver.

The new Radialinear™ phase plug was developed for a smoother, more linear frequency response with less distortion. The radialinear phase plug improves the high frequency response of the Rx22 by focusing the acoustical energy of the diaphragm to a central point within the throat of the horn. By focusing the acoustical energy we have reduced the level of high frequency cancellations and diffraction that are present in most other compression driver designs.

The Rx22 incorporates a full two-inch voice coil optimized in part through means of finite element analysis. It is constructed with a new high-temperature composite coil former and edge-wound copper-clad aluminum ribbon wire for an increase in the overall motor efficiency. The diaphragm is



constructed of an integral one-piece titanium diaphragm/suspension assembly. The one-piece titanium diaphragm reduces the amount of moving mass, extending the high frequency response of the driver.

The Rx22 magnet structure has been reshaped internally to focus the magnetic energy across every turn of the voice coil for lower distortion and improved linearity. The Rx22 incorporates the latest in ferrofluid technology. Peavey engineering has teamed up with the experts in the field of ferrofluid engineering to develop a special ferrofluid just for the Rx22. This in part is another reason for improved power handling, improved high frequency response and a cleaner crisper high end.

Ferrofluid is a thin, synthetic oil-based liquid holding billions of submicroscopic magnetic particles in suspension. It surrounds the voice coil for a controlled heat transfer. It essentially conducts the heat away from the voice coil, transferring it into the surrounding metal of the magnet structure. This in turn reduces the amount of power compression by lowering the voice coil temperature and improves the life of the Rx22 compression driver. One key characteristic of ferrofluid is its ability to dampen resonance modes within a speaker system. The

special grade of ferrofluid engineered for the Rx22 has been optimized for enhanced sound quality and performance.

Every Rx22 driver is subjected to a complete series of computer-control tests designed to ensure total adherence to specifications.

**APPLICATIONS**

The Rx22 has been designed and engineered for use with Peavey horns. However, any horn may be used as long as it consists of a standard 1 3/8" – 18 standard thread coupling. The Rx22 is an excellent choice for upgrading an older system with minimal expense.

**DESIGNER NOTES:**

The Rx22 driver is designed for use between the frequencies of 500 Hz to 20 kHz. However, we have found through years of experience as crossover designers for commercial applications that optimum driver performance can be achieved if the engineer limits the crossover design to 1000 Hz as compared to the 500 Hz lower limit of the driver. The 1000 Hz limit will greatly improve reliability plus improve the power handling by an extra 15% over the 500 Hz limit.

**INSTALLATION-DIAPHRAGM REPLACEMENT:**

Female spade lugs (supplied with each Rx22) should be used for connecting the leads from the crossover to the terminals on the Rx22. This will permit rapid field diaphragm replacement in the unlikely event of failure. The Rx22 diaphragm replacement kits are available from Peavey dealers and include complete gap cleaning instructions. (To prevent gap contamination by foreign materials, a failed diaphragm assembly should not be removed before a new diaphragm assembly is ready to be installed.)

**LIMITED WARRANTY:**

Peavey Model Rx22 compression drivers are warranted to the original purchaser to be free from defects from materials and workmanship 1 year after purchase date. Warranty status shall be determined by the authorized Peavey dealer or by Peavey upon inspection of inoperative unit at the factory. See warranty sheet for details.

**Rx™ 22 Graphs**

**Amplitude Response (1W 1m On-Axis)**

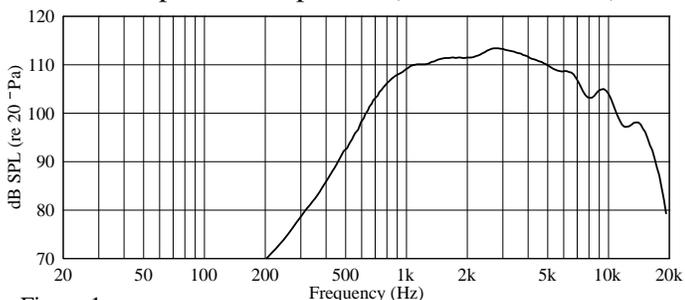


Figure 1

**Impedance**

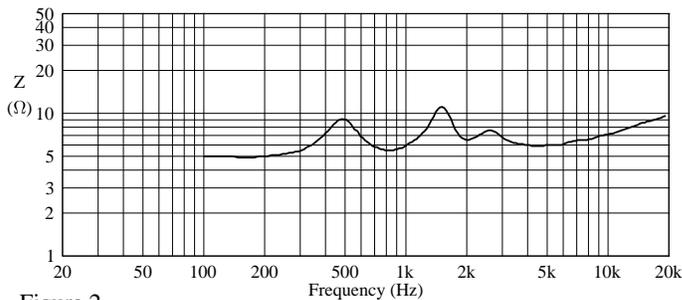


Figure 2



Features and specifications subject to change without notice.

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