

**PEAVEY**<sup>®</sup>  
ARCHITECTURAL ACOUSTICS<sup>®</sup>

# VTS™ 1000

## Wireless Transmitter/Receiver High-band System

### SPECIFICATIONS

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##### HANDHELD TRANSMITTER:

###### Frequency Range:

High band (150 to 216 MHz)

###### Frequency 1:

171.825 MHz

###### Frequency 2:

167.875 MHz

###### Frequency Stability:

+/- 0.005%, crystal controlled

###### RF Power Out:

50 mW

###### Modulation:

15 kHz deviation FM

###### FCC Compliance:

FCC approved under Part 90

###### Audio Frequency Response:

80 Hz to 15 kHz +0.5dB, -3 dB

###### Rumble Filter:

3-Pole (18 dB/octave) below 80 Hz

###### Audio Compression

2:1 (separate attack & decay optimized for voice)

###### Distortion:

.5% THD maximum below 10 kHz deviation

###### Battery (Alkaline):

9V alkaline or equivalent recommended

###### Battery Life:

6 to 10 hour operation

###### Operating Temperature:

-18 C to +54 C (0° F to +130° F)

###### Controls:

Power on/off switch, Audio Mute switch

###### Indicators:

Transmitter On (LED), Low battery indicator (flashing LED)

###### Size:

9¾" (24.8 cm.) x 1½" (3.49 cm.)

###### Weight:

9.0 oz. (255 g) without battery

##### RACK-MOUNT RECEIVER:

###### Frequency Range:

High band (150 to 216 MHz)

###### Frequency Stability:

+/- 0.005%, crystal controlled

###### FCC Compliance:

FCC approved under Part 15

###### Antenna Input:

50 ohms, nominal, type UHF receptacle

###### Image Rejection:

85 dB min.

###### Sensitivity:

14.8 dBf (1.5 uV/50 ohm) for 50 dB quieting (20-20 kHz)

11.3 dBf (1.0 uV/50 ohm) for 50 dB quieting (A-Weighted)

###### Ultimate Quieting:

43.3 dBf (40 uV/50 ohm) for 90 dB quieting (20-20kHz)

43.3 dBf (40 uV/50 ohm) for 100 dB quieting (A-Weighted)

###### Mute Quieting:

Greater than 90 dB (referenced to 40kHz deviation)

###### Audio Frequency Response:

40 Hz to 15 kHz +0.5dB, -3 dB

###### Distortion:

0.3% THD max. (below 15 kHz deviation)

###### Audio Expansion:

1:2 (separate attack & decay)

###### Mute Sensitivity:

Adjustable - front panel, 1.5 uV to 50 uV

###### Controls:

Power on/off, Line Output Level, Mute

###### Indicators:

RF Signal present (LED), Power On (LED)

###### Audio Output (Balanced):

600 ohm balanced line (transformer), 3-pin female XLR connector, front panel adjustable: (-90 dBm to +5 dBm/600 ohm/15 kHz deviation)

###### Audio Output (Unbalanced):

600 ohm unbalanced line, ¼" mono phone jack connector (-80 dBm to +5 dBm/1K ohm)

###### Diversity Expansion Option:

7-Pin female DIN connector (Peavey cable #0007299)

###### Size:

19" W x 1¾" H x 8½" D Rack-Mount

###### Weight:

7 lbs. 2 oz. (3.23 Kg)

###### Operating Temperature:

-18 C to +54 C (0° F to +130° F)

###### Power Requirements:

110-120 VAC, or 210-240 VAC, 50/60 Hz, 15 Watts

**OVERALL SYSTEM PERFORMANCE:**

**RF Frequency:**

High band (150 to 216 MHz)

**Frequency Stability:**

+/- 0.005%, crystal controlled

**Modulation:**

15 kHz deviation FM Componder System

**Overall Dynamic Range:**

Up to 100 dB (compander)

**Operating Range:**

Up to 1000 feet under ideal conditions  
(200-300 ft. nominal)

**Frequency Response:**

80 Hz to 15 kHz +5 dB, -3 dB

**System Distortion:**

0.5% THD max below 10 kHz modulation

**System Ultimate SNR:**

100 dB (A-weighted), 90 dB (20-20 kHz)

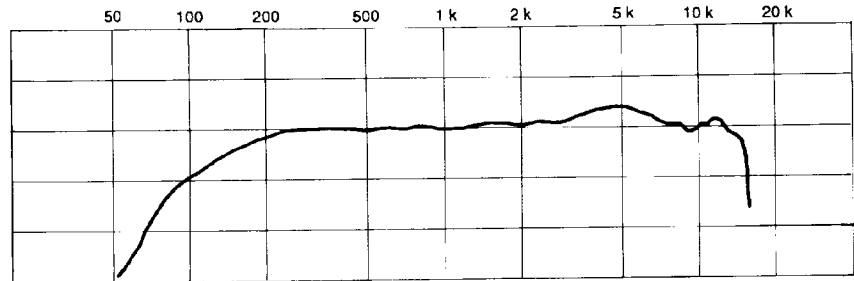
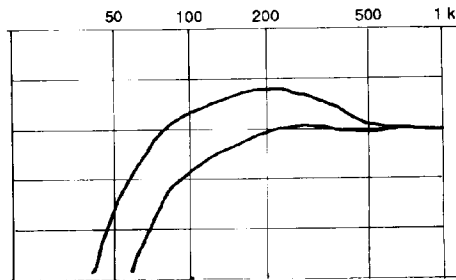


Figure 1. FREQUENCY RESPONSE

**DESCRIPTION**

The VTS™ 1000 is a high-band wireless transmitter and receiver system designed for high-fidelity transmission of audio signals. The basic receiver configuration is a high-efficiency single antenna system that is easily expandable to true diversity operation. The receiver/transmitter pair is fully companded to ensure maximum signal-to-noise ratio. The single-rack-space receiver features a user-settable mute control, ultra-low noise front end and multi-pole helical resonator filters. The true diversity option is accessible on the rear panel via a multi-pin DIN connector. Diversity expansion is achieved by adding another receiver of the same frequency; the connection is made with an optional diversity cable. The handheld transmitter is a high-efficiency design; it features RF power on/off and audio on/off to allow RF power to be maintained. The transmitter features an 80 Hz, 3-pole high-pass filter design to minimize low frequency handling noise and maximize radiated power. The handheld transmitter also features an RF power on LED that flashes when battery level is low. The Peavey Architectural Acoustics Division VTS™ 1000 is available in two VHF high-band frequencies - 167.875 MHz and 171.825 MHz - and all available frequencies are compatible.



Proximity effect is a naturally occurring phenomenon in unidirectional microphones. The effect is to accentuate or boost the low frequency response. This effect is a function of distance from the diaphragm to the source and increases as the diaphragm is moved closer to the source.

Figure 2. IMPEDANCE

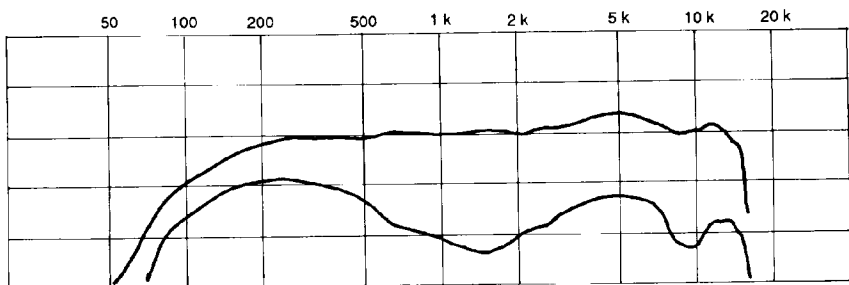
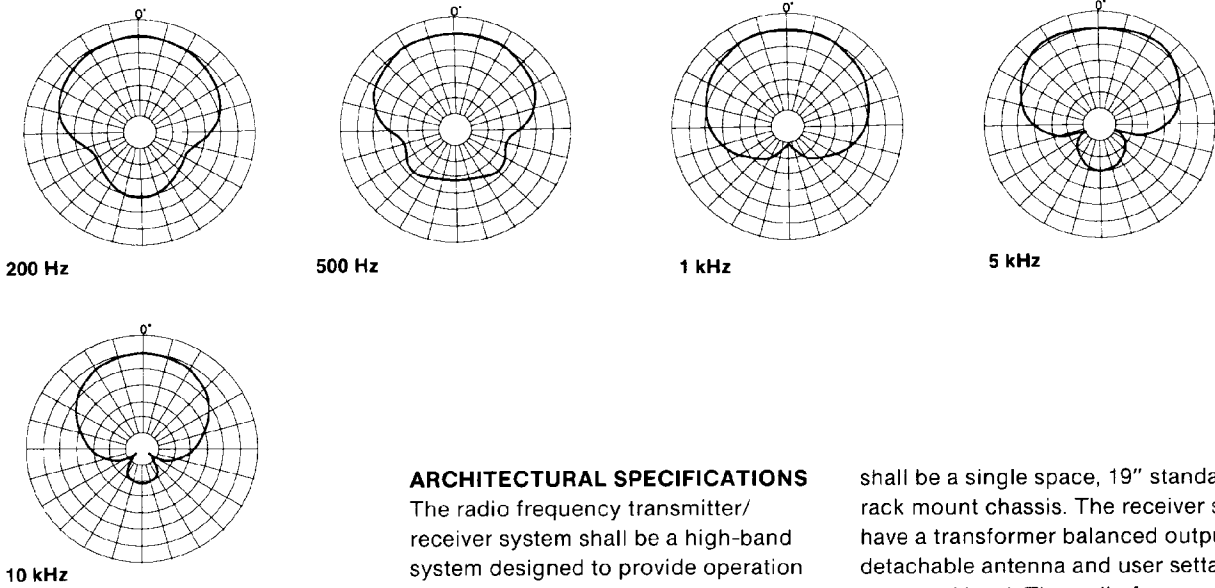


Figure 3. BEAMWIDTH VS. FREQUENCY

Note: Curves are measured using the VTS 1000 Receiver for the output device.

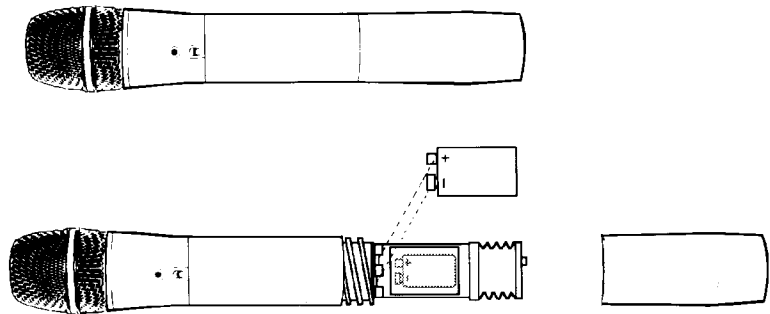
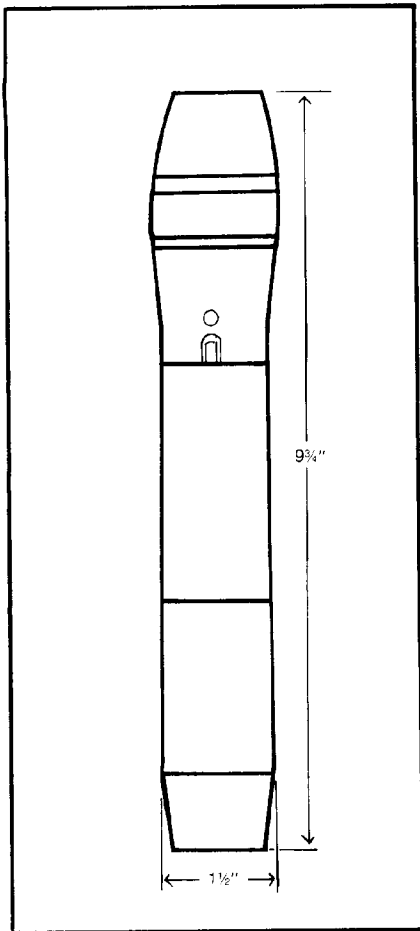
**Figure 4. Polar Patterns**



**ARCHITECTURAL SPECIFICATIONS**

The radio frequency transmitter/receiver system shall be a high-band system designed to provide operation over a range of 1000 feet unobstructed line of sight and 200-300 feet typical operation. The system shall be a single antenna receiver capable of expansion to true diversity operation. The receiver

shall be a single space, 19" standard rack mount chassis. The receiver shall have a transformer balanced output, detachable antenna and user settable mute and level. The radio frequency transmitter/receiver system shall be a Peavey Architectural Acoustics Division VTS™ 1000 or functional equivalent.



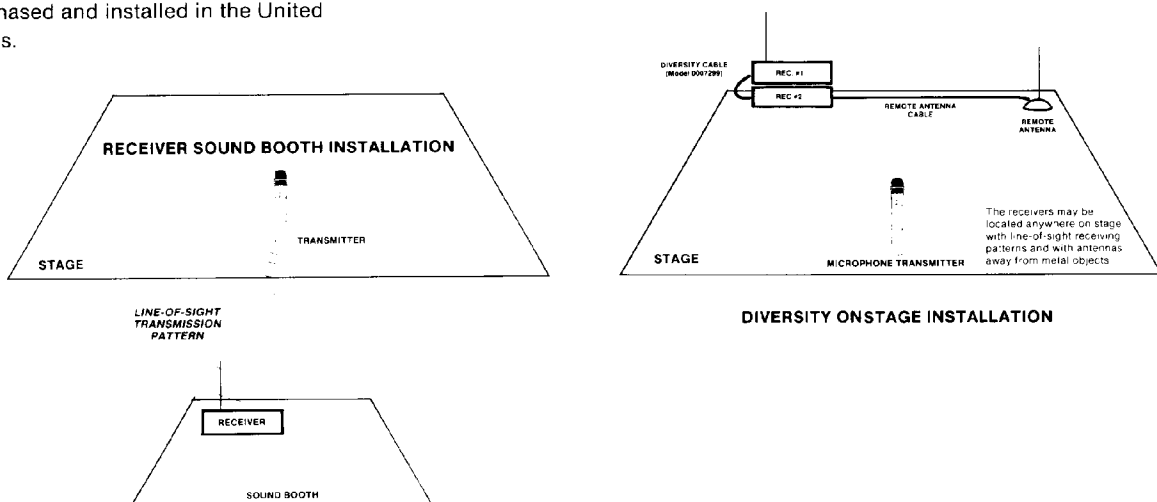
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Peavey Electronics Corporation warrants to the original purchaser of this new Architectural Acoustics product that it is free from defects in material and workmanship. If within one (1) year from date of purchase a properly installed product proves 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.

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