



PWS Helical Antenna

Unparalleled drop-out free RF performance for In-Ear and Wireless Mics, delivering more than double the range over other antennas

Antennas and the antenna system are vitally important in wireless microphone, in ear monitoring and intercom installations. Antennas are just as important in the RF realm as microphones and speakers are in the audio realm. This is because the antenna, like the microphone to audio, is the component in which energy is transferred from a radio frequency electro-magnetic field to an alternating current for receiving and vice versa for a transmitter. The helical antenna is the "Grand Daddy" of all antennae. In addition to its 14 dBi of forward gain, the helical delivers drop out free RF performance due to its multiple polarization characteristics.

One can relate other antennas, such as log periodic paddles, to an analog wristwatch that does not work; is still right twice a day. These electro-magnetic fields are polarized. When the transmitted RF energy is traveling through space on vertical plane and the receiver paddle is positioned vertically on the microphone stand one can expect maximum energy transfer. But if the same receiver antenna were picking up RF energy arriving on a horizontal plane, one would experience an RF drop out. With the helical antenna you can expect maximum RF energy transfer regardless of the polarization of the transmitted wave.

The helical antenna is particularly useful as an In Ear Monitor transmitter antenna. Because the receiver pack being worn by the artist will most likely include a 1/4 wave whip antenna, it will cover only one polarization. As the

RF energy from the In Ear Monitor transmitter radiates out of the helical, it is continuously spun through 360° of polarization, millions of times per foot. The result is crystal clear, drop out free audio at the artists' ears.

When used as wireless microphone receiver antennae, the same 360° polarization coverage characteristics can be expected. A performer singing on a wireless microphone transmitter while moving the handheld through different angles will cause the radiated wave to change polarization often. Helical antennae at the wireless microphone receivers will transfer maximum RF energy regardless of the polarization of the transmitted wave.

Helical antennae are used on virtually every live broadcast special event. Because multipath cancellations and RF dropouts are minimized by using the helical, one can expect more than twice the range over a log periodic paddle.

Vital Stats:

- Gain: 14 dBi
- Bandwidth: 550 MHz to >900 MHz.
- Beamwidth: 50°
- Connector: Right Angle BNC (standard), N (optional)
- Shipping dimensions: 14 x 14 x 14 inches
- Shipping Weight: 5 lb