



LAS-UHF Multi-Mode Antenna User Manual

Thank you for your purchase of the LAS-UHF antenna from Sventenna! The LAS-UHF stands for "Last Antenna System - Ultra High Frequency", it is an antenna system comprised of two LPDA's that support 3 modes of operation, one LAS-UHF may be the Last Antenna System you or your company ever needs.

Technical Specifications:

Stand-Alone / Spatial Diversity Mode:

Impedance Bandwidth: 470 - 663 MHz

Average Gain: 5.3 dBi

Average HPBW: 134 degrees

Average F/S: 5.6 dB

Average F/B: 15.8 dB

Average Return Loss: 17.3 dB

Polarization diversity Mode

(All parameters the same as in Stand-Alone / Spatial Diversity mode with the following exceptions):

Average Return Loss: 16 dB

Average Isolation: 24 dB

Circular Polarization Mode:

Impedance Bandwidth: 470 - 663 MHz

Average Gain: 5 dBiC

Average HPBW: 94 degrees

Average F/S: 8.1 dB

Average F/B: 17.1 dB

Average Axial Ratio: < 3dB

Average Return Loss: 19.6 dB

Polarization: LHCP/LHEP

Physical Dimensions (both antennas):

L – 9.75" (247.65 mm) W – 1.25" (31.75 mm) H – 11" (279.4 mm)

Approximate weight

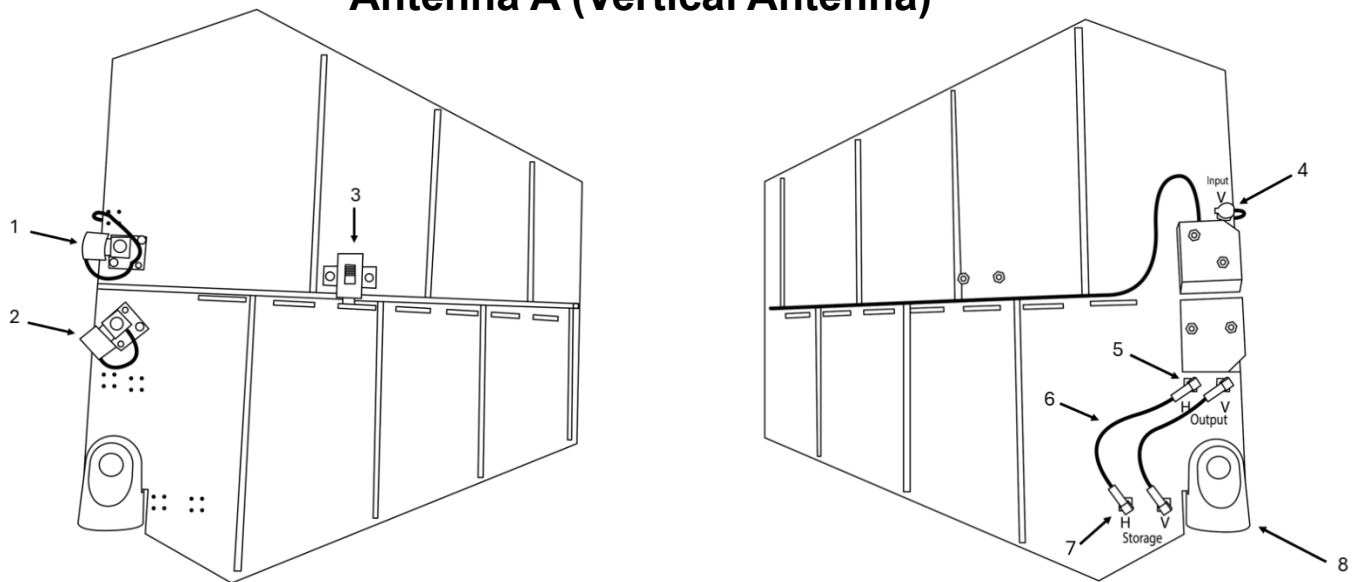
Vertical Antenna – 14.4 oz (.41 Kg)

Horizontal Antenna – 8.7 oz (.25 Kg)

Both Antennas Together – 1 lb 7.4 oz (.66 Kg)

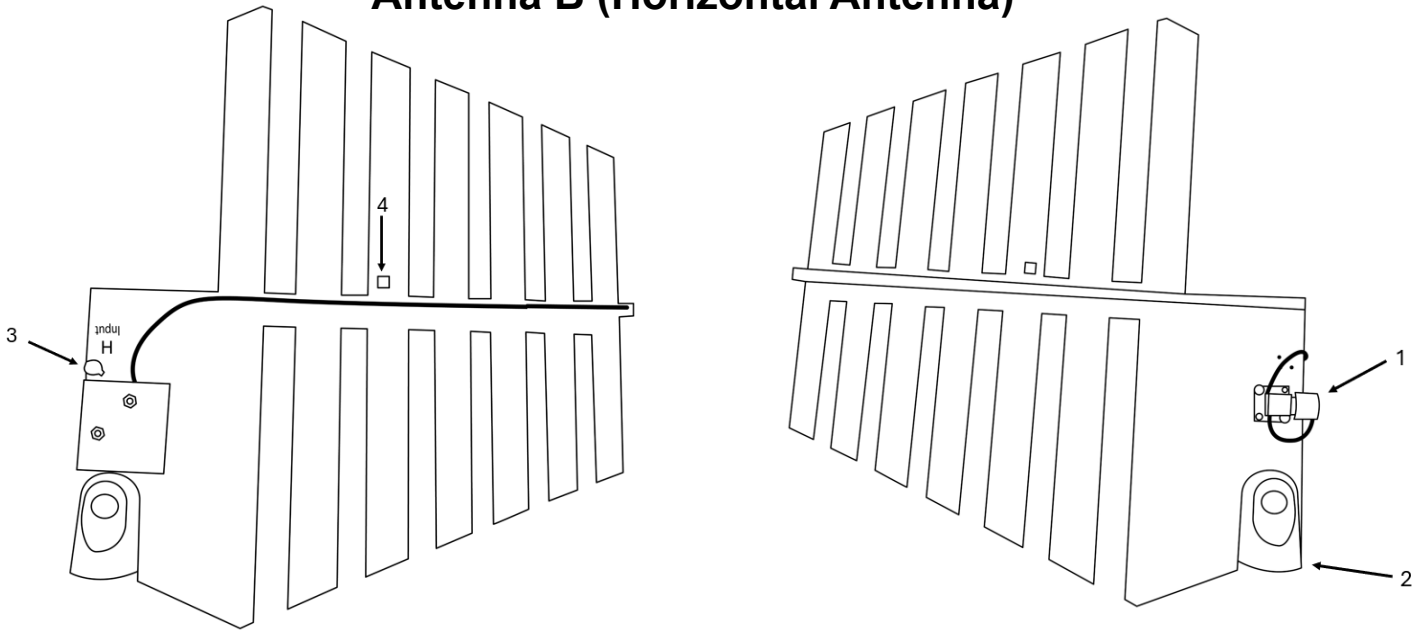
Parts of the LAS-UHF

Antenna A (Vertical Antenna)



1. BNC input/output for the LPDA with waterproof cover
2. BNC input/output for Circular Polarization (CP) mode with waterproof cover
3. Latch to hold Antenna B (Horizontal Antenna) in place
4. MCX input for Circular Polarization mode
5. MCX output from Circular Polarization Circuit
6. MCX Jumper for circular polarization mode
7. MCX storage port to hold MCX jumper when not in Circular Polarization mode
8. 5/8"-27 Mic stand mount

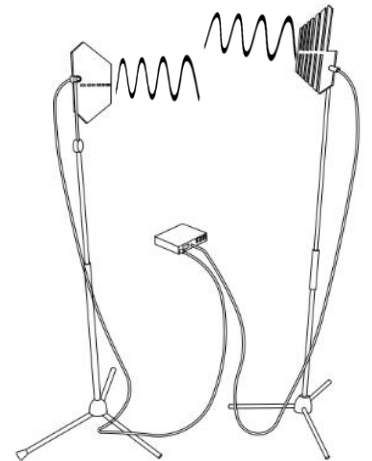
Antenna B (Horizontal Antenna)



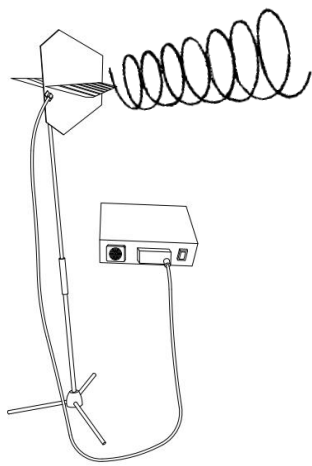
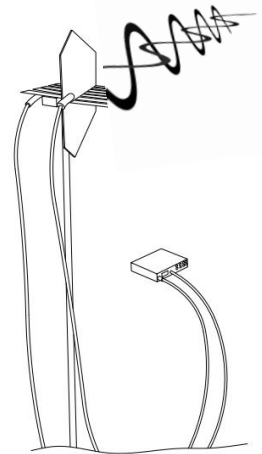
1. BNC input/output for the LPDA with waterproof cover
2. 5/8"-27 Mic stand mount
3. MCX input for Circular Polarization mode
4. Insert for Latch from Antenna A (Vertical Antenna)

Modes of Operation

1. Stand-Alone Operation/ Spatial Diversity – Either antenna can be used by itself for transmit or receive using the BNC LPDA connector. If using the system with a diversity receiver, using the BNC LPDA connectors on the LAS-UHF antennas, either antenna can then be connected to the A and B antenna inputs on the receiver and separated in space for a spatial diversity scheme.



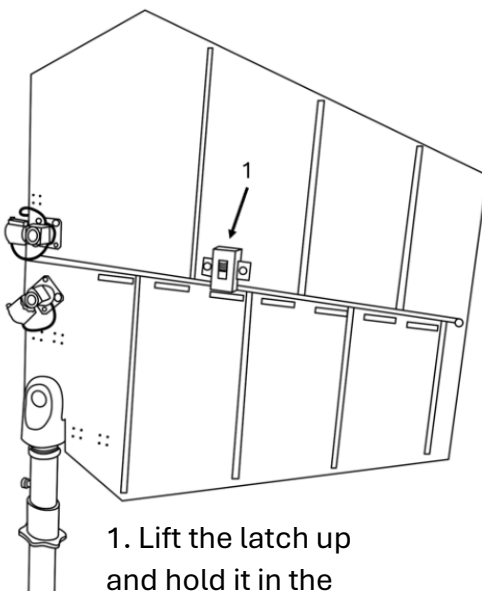
2. Polarization Diversity - The two LPDA's of the LAS-UHF can interlock orthogonally using only one mic stand. Then, each of the BNC LPDA connectors can be connected to the A and B antenna inputs on a diversity receiver.



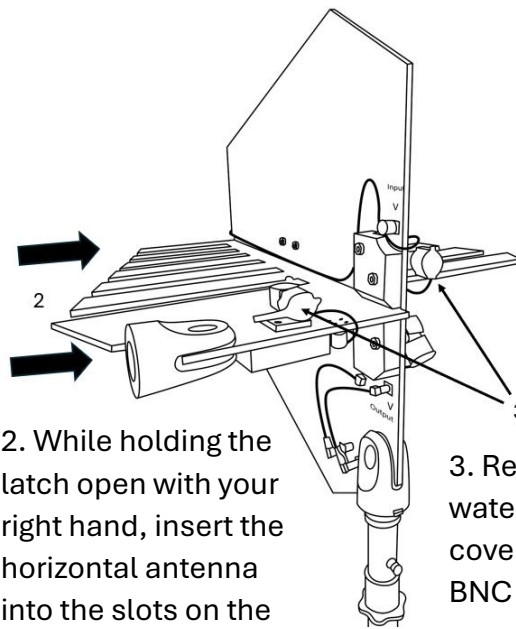
3. Circularly Polarized Transmit or Receive Mode - with the two LPDA's interlocked, two MCX jumpers can be moved and the CP BNC input/output used to create one circular polarized antenna.

Configuring the LAS-UHF for the different modes of operation:

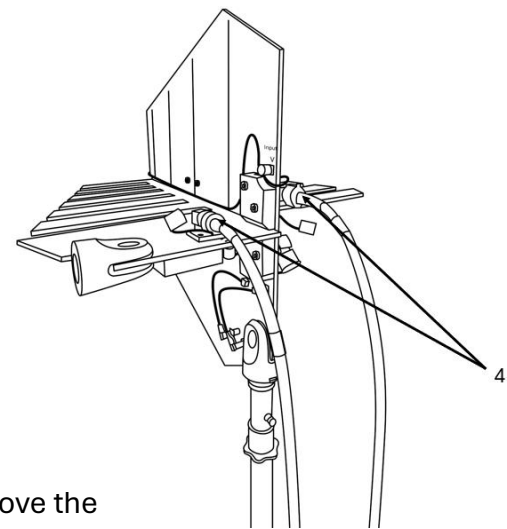
Polarization Diversity



1. Lift the latch up and hold it in the "up" position with your right hand



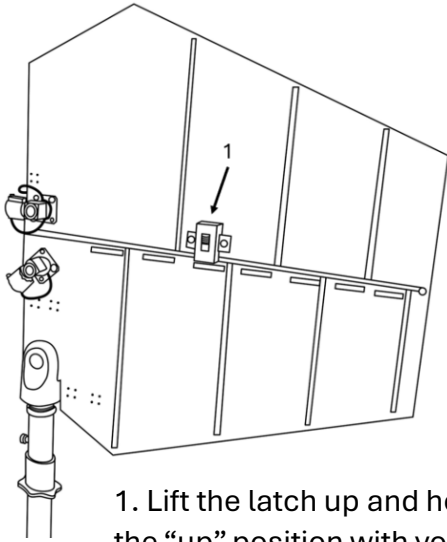
2. While holding the latch open with your right hand, insert the horizontal antenna into the slots on the vertical antenna with your left hand.



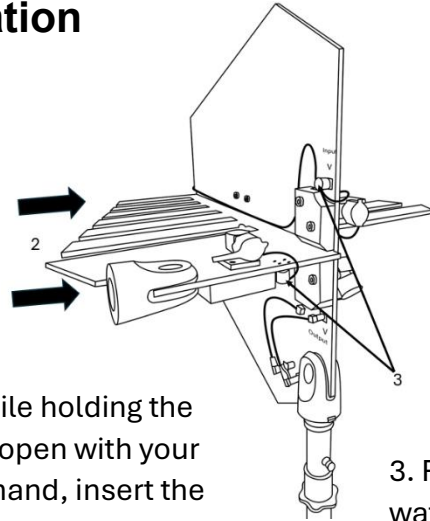
3. Remove the waterproof covers on the BNC LPDA connections.

4. Connect BNC coaxial cable from A/B Receiver inputs into the two BNC LPDA connectors on the LAS-UHF

Circular Polarization

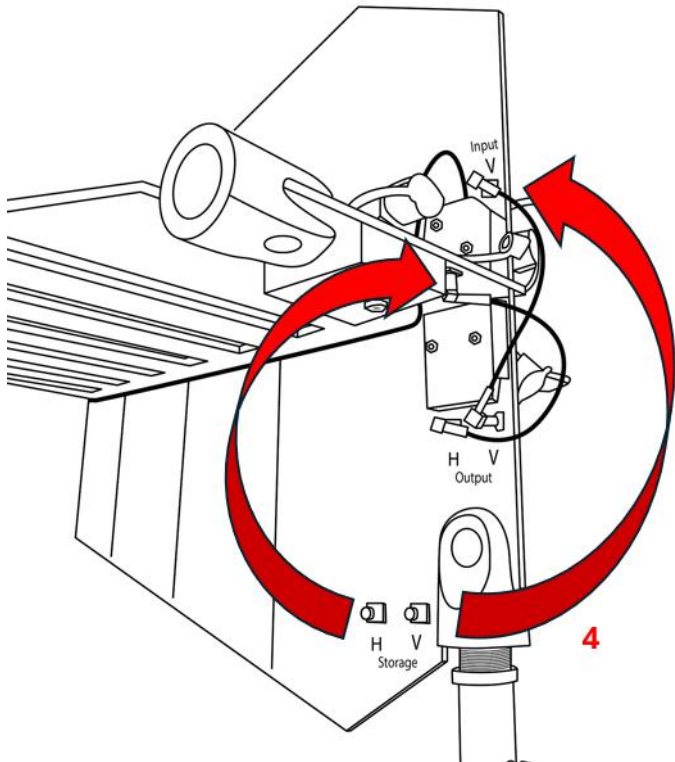


1. Lift the latch up and hold it in the "up" position with your right hand



2. While holding the latch open with your right hand, insert the horizontal antenna into the slots on the vertical antenna with your left hand.

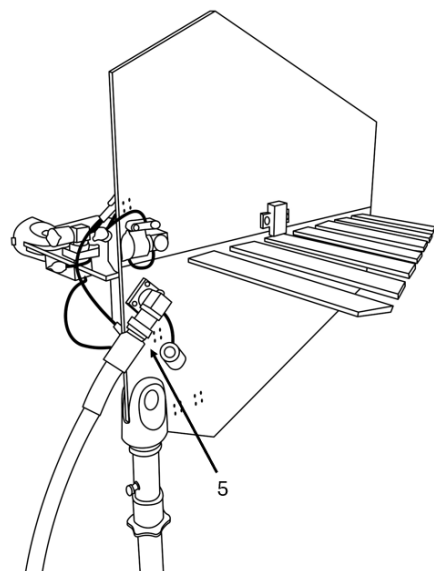
3. Remove the waterproof covers on the MCX input connections.



4. Remove MCX Jumper plugged into the "V Storage" connector and plug it into the "V input" connector on the Vertical antenna.

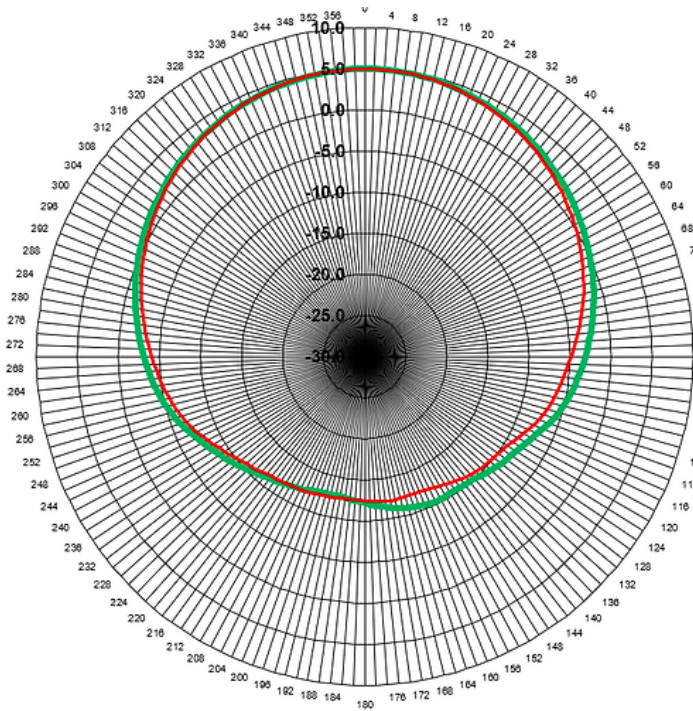
Next Remove the MCX Jumper plugged into the "H Storage" connector and plug it into the "H input" connector on the Horizontal antenna.

5. Remove the waterproof cover over the BNC connector for CP I/O and plug in a BNC coaxial cable from a transmit or receive system.

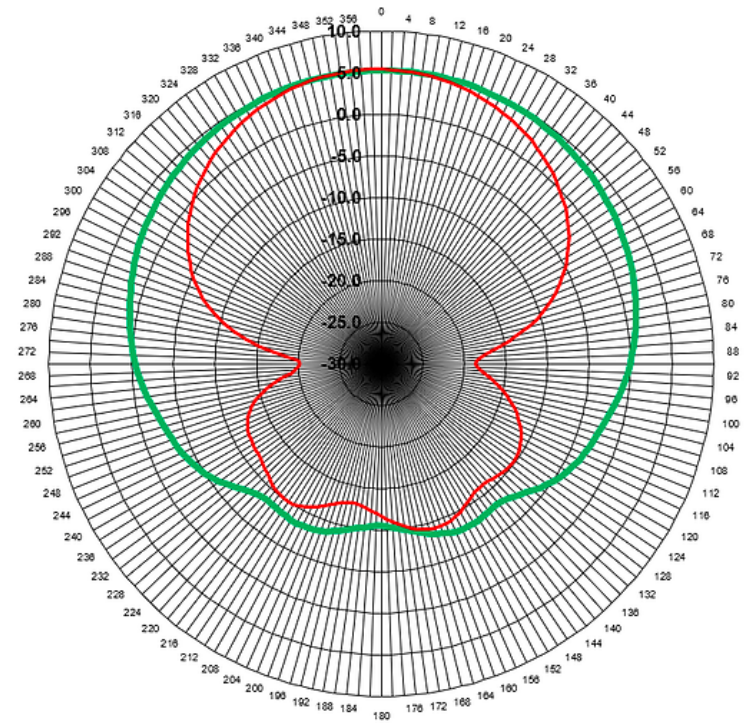


Additional Information

Average CP Pattern



Average Linear Pattern



Green = Azimuth

Red = Elevation

Structural Durability

- While not currently IP rated, the LAS-UHF can operate in direct rainfall conditions without degradation in performance provided that all unused connectors are covered with the provided waterproof plugs. However, while the LAS-UHF is water resistant to an extent, extreme water abuse is not recommended.
- Due to the unique design of the LAS-UHF in CP or Polarization diversity mode, caution should be used when deployed outdoors to prevent the LAS-UHF from falling over in wind. The LAS-UHF is designed to withstand the shock of falling onto a hard surface at normal microphone stand heights (approximately 6-7'). However, it is still recommended to avoid a situation where the LAS-UHF can fall and land on the Horizontal antenna when in CP or Polarization Diversity Mode.

Thank you so much for your support and trust in purchasing the LAS-UHF antenna system from Sventenna. If you have any issues with your antenna system, we are happy to send replacement parts or replace your antenna (parts and replacement cost may vary). Contact us at sventenna@gmail.com or visit us at www.sventenna.com

Patent Pending

