

GPS-AJ Antenna

Model Number 0310-814

Seavey Engineering Associates, Inc.

Antenna Design and Development

The model 031-814 GPS-AJ Antenna is a rugged, lightweight annular patch design. Its radiation pattern has a deep null at the horizon. This greatly reduces the susceptibility of the GPS system to interfering terrestrial signals. Field trials have successfully demonstrated this feature.



The antenna consists of an aluminum disk and a lexan polycarbonate radome which houses the patch element. The antenna is fully sealed and has been immersion tested, has successfully passed drop-tests onto concrete and has an exterior finish in a matte sandstone paint. The RF port is a right-angle 50Ω SMA jack located under the center of the antenna with a provision for an RF cable stress-relief clamp.

Specifications:

Frequency Range	1,575 MHz +/- 10 MHz (L1)
Polarization	RHCP
Peak Gain @ Zenith	8dBic Minimum
Axial Ratio @ Zenith	2 dB Maximum at L1
Horizon Suppression	<ul style="list-style-type: none">• RHCP: -20 dB Minimum• Vertical: -20 dB Minimum• Horizontal: -18 dB Minimum
VSWR	1.7:1 Maximum
Dimensions	9" Diameter, 1.52" High
Weight	10.4 Ounces
Sealing	Fully Immersion Sealed
High Temperature	Tested at 71° C
Drop Test	Three times to concrete from a height of 36"