

L1 Re-Radiation Kit HNRRKIT



The GPS Hanger Re-Radiating Kit (HNRRKIT) is a complete re-radiating system that allows re-radiation of the GPS L1 signal indoors. The HNRRKIT consists of an active roof antenna, a re-radiating amplifier with a wall mount plug-in transformer that powers the entire system, and a passive re-radiating antenna. The GPS L1 signal from the roof antenna is amplified and radiated indoors. Thus, if a receiver has line of sight with the re-radiating antenna, it can receive the GPS signal indoors up to 30m away.

Applications:

1. The HNRRKIT is a necessity if you want to test your GPS receiver indoors with the antenna connected.
2. The HNRRKIT allows you to track GPS while inside a hanger or garage. This allows you to work out problems and see failures in GPS systems before they are deployed.

Roof Antenna: Electrical Specifications, $T_A = 25^\circ\text{C}$

Parameter	Conditions	Min	Typ	Max	Units
Frequency	L1		1.575		GHz
Bandwidth			20		MHz
Out Imped.			50		Ω
Pre-Amp Gain			35	40	dB
Noise Figure			2.75		dB
Output SWR				2.0:1	-
Filtering	1626 MHz	-20			dB
	1500 MHz	-10			dB
Req. DC Input V.		4.5		5.5	Vdc
Current			22		mA

Re-Radiating Amplifier: Electrical Specifications, $T_A = 25^\circ\text{C}$

Parameter	Conditions	Min	Typ	Max	Units
Freq. Range	Ant – J1	1.1		1.7	GHz
In/Out Imped.	Ant, J1		50		Ω
Gain	Ant – J1, Normal Configuration	20	24.5	26	dB
Input SWR ⁽²⁾	J1 - 50 Ω			1.8:1	-
Output SWR	Ant - 50 Ω			1.8:1	-
Noise Figure	Ant – J1		3.3	3.5	dB
Gain Flatness	L1 – L2 ; Ant – J1		0.5	1	dB
Reverse Isolation	J1 – Ant	35			dB
Group delay Flatness	$\tau_{d,max} - \tau_{d,min}$: Ant – J1			1	ns

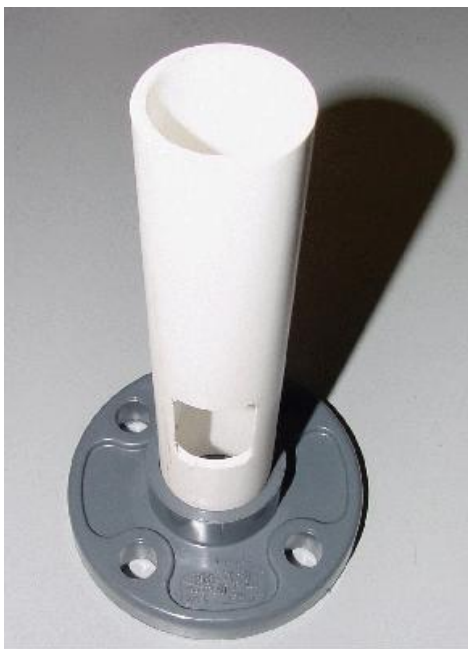
Re-Radiating Antenna: Electrical Specifications, $T_A = 25^\circ\text{C}$

Parameter	Conditions	Min	Typ	Max	Units
Frequency	L1		1.575		GHz
Bandwidth				20	MHz
Impedance			50		Ω
Peak Gain			3		dBic
Output SWR				1.5:1	-
Polarization			RHCP		-

Accessories for L1 Re-Radiation Kit HNRRKIT



Re-Radiating Amplifier Mount
Universal mount for indoor installation of
Re-Radiating Amplifier and Antenna.



L1 Roof Antenna Mount
L1 Active Antenna Roof Mount.